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BIBLIOGRAPHY

OF

THE MORE IMPORTANT CONTRIBUTIONS

TO

AMERICAN ECONOMIC ENTOMOLOGY.

PREPARED, BY AUTHORITY OF THE SECRETARY OF AGRICULTURE,

BY

SAMUEL HENSHAW.

Parts I, II, and III.

THE MORE IMPORTANT WRITINGS

OF

BENJAMIN DANN WALSH

AND

CHARLES VALENTINE RILEY.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1890.

FORTY-SEVENTH CONGRESS, FIRST SESSION.

CONGRESS OF THE UNITED STATES,
IN THE HOUSE OF REPRESENTATIVES,
June 24, 1882.

Resolved, By the House of Representatives (the Senate concurring) that there be printed, for the use of the Department of Agriculture, one thousand copies of a special report, entitled "Bibliography of Economic Entomology."

Attest:

EWD. MCPHERSON,
Clerk.

Passed the Senate July 6, 1882.

F. E. SHOBER,
Acting Secretary.

A true copy.

EWD. MCPHERSON,
Clerk.

LETTER OF TRANSMITTAL.

U. S. Department of Agriculture,
Division of Entomology,
Washington, D. C., June 12, 1889.

Sir: In the absence of Professor Riley, who is now at the Paris Exposition in official capacity, I beg to submit for publication Parts I, II, and III of the Bibliography of American Economic Entomology, which was ordered by Congress in July, 1882. Owing to various unforeseen delays this work has not yet been completed. Its preparation was originally assigned by Professor Riley to Mr. B. Pickman Mann, formerly of this Division, and upon the severance of his connection with the Department, in the fall of 1885, it was turned over in an incomplete and fragmentary condition to Mr. Samuel Henshaw, of Boston, who has added greatly to it and practically rewritten the portions already prepared.

The extent of the work renders it advisable to publish it in several parts, and as there is unquestionably a more urgent need on the part of working economic entomologists for a bibliography of the writings of B. D. Walsh and C. V. Riley than of others, on account of their great number and value, these portions have been finished first. Their immediate publication will probably antecede the publication of the final part only by a few months.

Very respectfully, yours,

L. O. Howard,
Acting Entomologist.

Hon. J. M. Rusk,
Secretary of Agriculture.

TABLE OF CONTENTS TO PARTS I, II, AND III.

	Page.
Introduction	7
The writings of B. D. Walsh (1860–1873)	9
The joint writings of B. D. Walsh and C. V. Riley (1868–1869)	51
The writings of C. V. Riley (1863–1888)	97
Systematic index of the new names:	
By B. D. Walsh and by Walsh and Riley	373
By C. V. Riley	377
Index	381

INTRODUCTION TO PARTS I, II, AND III.

The object of the present lists is to record the principal entomological writings of B. D. Walsh and C. V. Riley. Few will be likely to criticize the association of the names of Walsh and Riley in a list of this kind, so largely devoted to economic entomology, or to question the desirability of collating their writings in advance of others.

As recognized authorities upon entomology, especially from an economic standpoint, their writings have been extensively quoted sometimes with, but frequently without, credit in the agricultural and horticultural journals of the day. These secondary references, though of a certain value when the original is inaccessible, have, as a rule, been omitted. In citing such as are given I have used my personal judgment. To have given all would have increased the size of the list considerably with but a slight increase in its usefulness.

Occasionally, a publisher to meet some popular demand puts the writings of an author into book form without the knowledge of the latter. Such an occurrence has happened more than once with Dr. Riley's writings. To mention but one: In 1877 Messrs. George Rutledge & Sons, of London, published "The Colorado beetle, with suggestions for its repression and methods of destruction," with Dr. Riley's name upon the title-page as author. This is a partial reprint of Potato Pests entirely unsanctioned and published without knowledge of the author. (See *London Times*, October 17, 1887.) These publishers' reprints are omitted from this list. The "S.-b." after the reference of many of the articles from the agricultural and other journals refers to the series of scrap-books used in divisional work.

A biographical sketch of Dr. Walsh is given in the second volume of the *American Entomologist*, Vol. II, No. 3, pp. 65–68, January, 1870.

The chief facts in Dr. Riley's life may be found in the "Commonwealth of Missouri" (1875) and the *National Farmer*, September 20, 1883.

In the preparation of the list I have freely used all data accumulated by the Division, notably the work of Mr. B. P. Mann and a private list of Dr. Riley's.

Many persons, both within and without the Department, have kindly answered my inquiries.—S. H.

BIBLIOGRAPHY OF THE MORE IMPORTANT CONTRIBUTIONS TO AMERICAN ECONOMIC ENTOMOLOGY.

THE WRITINGS OF B. D. WALSH (1860–1873).

---

1. WALSH, B. D. Bark-lice. <Western Rural. S.-b. No. 3, p. 11.

   Habits of *Lecanium* compared with *Aspidiotus* [=*Mytilaspis*].

2. WALSH, B. D. Entomological notes. <Prairie Farmer, 17 May, 1860, [v. 21], n. s., v. 5, pp. 308–309, figs. S.-b. No. 1, pp. 42–43.

   Notice of *Coccus harrisii* n. sp. [=*Chionaspis furfurus*]; figure of its scales; description and figure of *Capsus oblineatus* [=*Lygus pratensis*] infesting apple, quince, and pear trees; figure of larva case and imago and description of *Phycita nebulo* [=*Acrobasis indiginella*]; figures of imago and of injuries of *Amphicerus bicaudatus;* habits of the same and of *Scolytus* [=*Xyleborus*] *pyri, Saperda bivittata* [=*candida*] and *Chrysobothris femorata;* means against the last.

3. WALSH, B. D. "Cutworms." <Prairie Farmer, 9 August, 1860, [v. 22], n. s., v. 6, pp. 82–83, fig. S.-b. No. 1, pp. 84–85.

   Account of the larvæ of *Lachnosterna quercina* [=*fusca*] of *Elateridæ* of *Agrotidæ* and of *Pangus* [=*Harpalus*] *caliginosus;* figures of larvæ and imagos of the same or allied species; also of *Heteronychus* [=*Ligyrus*] *relictus, Lopha* [=*Bembidium*] *4-maculatum* and *Agonoderus pallipes.*

4. WALSH, B. D. [*Ips quadrisignatus*, Say.] <Prairie Farmer, 1860, [v. 22], n. s., v. 6, p. —.

   Ips 4-signatus [=*fasciatus*] attacks growing ears of sweet corn.

5. WALSH, B. D.] "Insect Life." < Proc. Agric. Conv.; Ann. meeting Ill. Nat. Hist. Soc.; Comm. Exerc. State Normal Univ. [Bloomington, Ill.], 1860, pp. 11–12.

   Report, compiled from Chicago papers of address delivered before the Illinois Natural History Society; comparison between injurious insects and an invading army; necessity of appropriations for carrying on entomological work; economic entomology in Europe; importance of beneficial insects.

6. WALSH, B. D. Insects injurious to vegetation in Illinois. < Trans. Ill. State Agric. Soc., September, 1861, v. 4, pp. 335–378, figs. 1–11. Separate: 1861, 43 pp., 1 pl. Reprint in part: < Trans. Ill. Nat. Hist. Soc., v. 1. Prairie Farmer, 6 December, 1861, [v. —], n. s., v. —, pp. 370–371.

   Ravages of injurious insects; enemies of the same; notes on *Cecidomyia destructor*, *Saperda bivittata* [=*candida*], *Chrysobothris femorata*, *Conotrachelus nenuphar* and *Blissus leucopterus;* natural history, ravages and means against *Leucania unipuncta;* figures its larva, pupa and imago; descriptions and figures primary and secondary parasites of the army-worm; figures *Hippodamia* (=*Megilla*) *maculata*, *Coccinella munda* [=*sanguinea*] and a larval coccinellid.

7. WALSH, B. D. From Benj. D. Walsh. < Illinois Farmer, October, 1861.

   Denies statement attributed by C. Thomas (Illinois Farmer, September, 1861), that he (Walsh) believed in the hibernation of the pupa of *Leucania unipuncta*.

8. WALSH, B. D. The army-worm question. < Prairie Farmer, 5 December, 1861, [v. 24], n. s., v. 8, pp. 370–371. S.-b., No. 4, p. 22.

   Replies to arguments of C. Thomas (Prairie Farmer, 1861, v. 8, pp. 306–307), on the hibernation of *Leucania unipuncta*.

9. WALSH, B. D. The army-worm question. Mr. Walsh's reply. < Field Notes, 14 December, 1861.

   Controversial answer to the assertion of J. H. Klippart (Field Notes, 30 November, 1861), that the larvæ of *Leucania unipuncta* are viviparous.

10. WALSH, B. D. The army-worm and its enemies. <Prairie Farmer, 1861, [v. 24], n. s., v. 8, p. 4. Reprint: <Trans. Ill. Nat. Hist. Soc., v. 1. Prairie Farmer, 6 December, 1861, [v. 24], n. s., v. 8, pp. 370–371.

    Popular account of some of the parasites of *Leucania unipuncta*.

11. WALSH, B. D. The army-worm. <Prairie Farmer, 1861, [v. 24], n. s., v. 8, pp. 257–258. Reprint: <Trans. Ill. State Agric. Soc., 1861, v. 4, pp. 373–375.

    Hibernation of the egg; spring burning as a means against *Lucania unipuncta;* description of *Hockeria* [=*Haltichella*] *perpulchra* n. sp.; notes on other parasites.

12. WALSH, B. D. The army-worm and its insect foes. <Prairie Farmer, 1861, [v. 24], n. s., v. 8, pp. 322–323; 337–339; 354–355.

    Habits and description of larva and imago of *Leucania unipuncta;* hibernation of the egg; figures of larva, pupa and imago; also of *Exorista* [=*Nemorœa*] *leucaniæ*, *Pezomachus minimus*, *Microgaster* [=*Apanteles*] *militaris*, *Hockeria* [=*Haltichella*] *perpulchra* and *Glyphe viridascens*.

13. WALSH, B. D. Bug preying on honey-bee. <Prairie Farmer, 1861. S.-b., No. 4, p. 7.

    Unknown heteropteron, said to prey on *Apis mellifica*.

14. Walsh, B. D. The pea and its insect foe. <Prairie Farmer, 1861. S.-b., No. 4, p. 12.

Unknown leaf-miner and leaf-eater on pea; directions for rearing insects.

15. Walsh, B. D. The grain weevil. <Journ. Ill. State Agric. Soc., January, 1862, fig. Reprint: <Trans. Ill. State Agric. Soc. v. 5, pp. 484–485.

Sitophilus [= *Calandra*] *remotepunctata* infests wheat.

16. Walsh, B. D. [*Ithycerus noveboracensis.*] <St. Louis Valley Farmer, March, 1862, v. 14, pp. 82–85, fig.

Ithycerus noveboracensis attacks twigs of fruit trees in nurseries.

17. Walsh, B. D. [Army-worm.] <St. Louis Valley Farmer, 1862, v. 14, p. 161.

Correction of mistake of E. S. Washington (St. Louis Valley Farmer, 1862, v. 14, p. 161), who mistook parasitic larvæ for young *Leucania unipuncta;* economy of parasites of army-worm.

18. Walsh, B. D. [*Brachytarsus variegatus.*] <Journ. Ill. State Agric. Soc., March, 1862, pp. 8–12, fig.

Brachytarsus variegatus parasitic (?) on a large orange-colored cecidomyid (?) larva in stems of wheat.

19. Walsh, B. D. A new insect in wheat, *Bruchus.* <Journ. Ill. State Agric. Soc., April, 1862. Reprint: <Trans. Ill. State Agric. Soc., v. 5, pp. 485–490.

20. Walsh, B. D. [Two apple-tree borers.] <Journ. Ill. State Agric. Soc., June, 1862, pp. 21–23.

Treats of *Chrysobothris femorata* and *Saperda bivittata* [= *candida*].

21. Walsh, B. D. [Colorado potato beetle.] <St. Louis Valley Farmer, July, 1862, pp. 209–210. Reprint (?): <Prairie Farmer, 6 June, 1863, v. —, p. 356, fig.

Doryphora 10-lineata infests egg plants, potato and tomato vines, etc., in Kansas and Iowa.

22. Walsh, B. D. Fire-blight. Two new foes of the apple and pear. <Prairie Farmer, 6 September, 1862, [v. 26], n. s., v. 10, pp. 147–149, fig. Separate: pp. 4.

Fire-blight defined; probably caused by attacks of *Chloroneura malefica* [=*Empoasca viridescens*] and *C. maligna* [=*E. obtusa*]; characters, habits, and ravages of the same; synoptic separation of several genera of *Typhlocybini*; two (2) new genera and thirteen (13) new species are described. For a list of the same see the *Systematic Index.* The figures show *C. malefica* and *C. maligna* and the venation of allied forms.

(Note.—The descriptive portion with figures is reprinted in Proc. Bost. Soc. Nat. Hist., February, 1864, v. 9, pp. 314–318.)

23. Walsh, B. D. Plant lice, the corn-root louse, a new enemy to the corn. <Journ. Ill. State Agric. Soc., September, 1862, pp. 8–13, fig. Reprint: <Trans. Ill. State Agric. Soc., v. 5, pp. 491–497, fig.

Aphis maidis (?) infests the roots of young Indian corn as well as the stems of the roasting ears.

24. Walsh, B. D. List of the Pseudoneuroptera of Illinois contained in the cabinet of the writer, with descriptions of over forty new species, and notes on their structural affinities. <Proc. Acad Nat. Sci. Phil., September, 1862, pp. 361–402.

One hundred and nine (109) species are enumerated; two (2) new genera and forty (40) new species are described. For a list of the same see the *Systematic Index.*

25. Walsh, B. D. [*Erythroneura tricincta* Fitch.] < St. Louis Valley Farmer, October, 1862, pp. 305–306, fig.

Erythroneura [=*Typhlocyba*] *tricincta* on grape-vines.

26. Walsh, B. D. Grasshoppers and locusts. < Journ. Ill. State Agric. Soc., November, 1862, pp. 1–3. Reprint: < Trans. Ill. State Agric. Soc., v. 5, pp. 497–499.

Injuries of locusts in the Mississippi Valley; differences between locusts and Cicadas.

27. Walsh, B. D. On the genera of *Aphidæ* found in the United States. < Proc. Ent. Soc. Phil., December, 1862, v. 1, pp. 294–311, figs. 1–8.

Synoptic separation of the genera; list of seventy (70) species found in the United States, with food habitat; *Aphis* [=*Nectarophora*] *rudbeckiæ* Fitch, *A. vitis ?* Scop., *A. maidis ?* Fitch, *Lachnus caryæ* Harris, *Thelaxes* [=*Colopha*] *ulmicola* Fitch are described; one (1) new genus and eleven (11) new species are described; see the *Systematic Index* for a list of the same; the figures show venation and other details. Two (2) new ants, *Formica aphidicola* and *F.* [=*Lasius*] *latipes,* are described.

28. Walsh, B. D. [Observations on *Papilio glaucus* and *P. turnus.*] < Proc. Ent. Soc. Phil., February, 1863, v. 1, pp. 349–352.

Reasons for considering *turnus* and *glaucus* identical; the latter a dimorphic ♀ of the former; distribution of the two forms; citation of similar case among *Pieridæ* and of analogous one among *Dytiscidæ;* description of larva from which a black ♀ was raised.

29. Walsh, B. D. [Katydid eggs.] < Prairie Farmer, 28 February, 1863, [v. 27], n. s., v. 11, p. 132, fig.

Oviposition of katydid eggs on apple-twigs.

30. Walsh, B. D. Fire-blight. < Prairie Farmer, 4 April, 1863, [v. 27], n. s., v. 11, p. 212, fig. S.-b., No. 1, p. 10.

Description and figures of eggs of *Chloroneura malefica* [=*Empoasca viridescens*] and the slits in which they are deposited in apple-twigs; cause of fire-blight; suggestion of remedies.

31. Walsh, B. D. Insects injurious to fruit trees. < Prairie Farmer, 2 May, 1863, [v. 27], n. s., v. 11, p. 276, fig. S.-b., No. 1, p. 9.

Fruit and foliage of pear-trees destroyed by *Capsus oblineatus* [=*Lygus pratensis*]; description and figure of imago; habits, food-plants, and remedies.

32. Walsh, B. D. The ten-striped spearman. < Prairie Farmer, 6 June, 1863, [v. 27], n. s., v. 11, p. 356, fig. S.-b., No. 1, p. 7.

History, ravages, and means against *Doryphora 10-lineata;* figure of imago; mentions other injurious *Phytophaga.*

33. **Walsh, B. D.** The plum-gouger; a new foe of the plum. <Prairie Farmer, 13 June, 1863, [v. 27], n. s., v. 11, pp. 372–373, figs. 1–3. S.-b., No. 1, p. 6.

Habits, description, and figures of *Anthonomus ? prunicida* n. sp. [= *Coccotorus scutellaris*], injurious to plums; comparison with *Conotrachelus nenuphar;* figure of the latter.

34. **Walsh, B. D.** The plum-gouger. <Prairie Farmer, 11 July, 1863, [v. 28], n. s., v. 12, p. 21, 2 figs. S.-b., No. 1, p. 10.

Distribution and ravages of *Anthonomus prunicida* [= *Coccotorus scutellaris*]; list of insects found on plum-trees; description of *Conotrachelus puncticollis* n. sp. [= *C. geminatus*]; usefulness of *Reduvius raptatorius* [= *Sinea diadema*]; figures *A. prunicida* and *R. raptatorius.*

35. **Walsh, B. D.** A new fruit foe. <Prairie Farmer, 18 July, 1863, [v. 28], n. s., v. 12, p. 37, fig. S.-b., No. 1., p. 11.

Description and figure of imago of *Epicœrus imbricatus;* injuries to fruit trees and gooseberry-bushes; supposed habits of this and allied species; hibernation of the larva of *Conotrachelus;* description of *C. cratægi* n. sp.

36. **Walsh, B. D.** Leaf-hopper. <Prairie Farmer, 25 July, 1863, [v. 28], n. s., v. 12, p. 53.

Proconia [= *Oncometopia*] *undata* injurious to grape-vines in southern Illinois; its eggs laid in twigs.

37. **Walsh, B. D.** Locust borers. <Prairie Farmer, 15 August, 1863, [v. 28], n. s., v. 12, p. 101. S.-b., No. 1, p. 12.

Description and habits of *Clytus* [= *Cyllene*] *robiniæ; Clytus* of *Carya* does not attack *Robinia; Cossus robiniæ* mentioned; larvæ and imagos of *Nitidulidæ* found under decaying bark.

38. **Walsh, B. D.** Insect friends and insect foes. The twice-stabbed lady-bird. <Prairie Farmer, 1863, [v. 28], n. s., v. 12; 22 August, p. 117, figs. 1, 2; 29 August, p. 133, figs. 3, 4. S.-b., No. 1, pp. 11–12.

Description and figure of imago of *Chilocorus bivulnerus;* figure of larva; destruction of injurious insects by predaceous insects; brief description of and means against *Lytta cinerea* [= *Macrobasis unicolor*], found on potato, English bean, and apple, and *L.* [= *Epicauta*] *vittata,* on potato; figures *Lytta atrata* [= *Epicauta pennsylvanica*], found on aster and potato, and larva-cases of *Solenobia* sp. from under bark of apple-trees; note on allies of *Solenobia.*

39. **Walsh, B. D.** Observations on certain N. A. Neuroptera, by H. Hagen, M. D., of Kœnigsberg, Prussia; translated from the original French MS., and published by permission of the author, with notes and descriptions of about twenty new N. A. species of Pseudoneuroptera. <Proc. Ent. Soc. Phil., October, 1863, v. 2, pp. 167–272, fig.

Dr. Hagen's comments relate to the species described in No. 24; the author's notes supplement these and describe three (3) new genera and twenty-three (23) new species; for a list of these, see the *Systematic Index;* descriptions of previously described species, with notes on their habits, distribution, etc., are also given; *Bætis interlineata* [= *Siphlurus femoratus*] is proposed

39. WALSH, B. D.—Continued.

(p. 190) in case *B.* [=*S.*] *femorata* Walsh is distinct from *B.* [=*S.*] *femorata* Say; in a note (p. 255) *Ophiogomphus mainensis* n. sp. is described from Packard's manuscript; the venation of the *Odonata* and the terminal abdominal characters of *Sialis infumata* are figured.

40. WALSH, B. D. On certain remarkable or exceptional larvæ, coleopterous, lepidopterous, and dipterous, with descriptions of several new genera and species, and of several species injurious to vegetation, which have been already published in agricultural journals. <Proc. Bost. Soc. Nat. Hist., February, 1864, v. 9, pp. 286–318.

Habits of the larva of *Cotalpa lanigera*, *Pelidnota punctata*, *Cratonychus* [=*Melanotus*] *incertus*, and *Xyloryctes satyrus;* comparative characters of the larva and imago of *Halisidota antiphola* n. sp. [=*tessellaris*]; description of larva, pupa, and imago of *Sphingicampa* (n. g.) *distigma* n. sp. [=*bicolor*]; characters and affinities of *Dryocampa* [=*Sphingicampa*] *bicolor ?*; description of imagos of *Limacodes scapha* and *L. ?* [=*Phobetron*] *hyalinus* n. sp., and of larva of the last and *L. ?* [=*Phobetron ?*] *tetradactylus* n. sp.; description of the larva, pupa, and imago of *Hipparchiscus* n. g. *venustus* n. sp. [=*Aplodes mimosaria*]; habits and description of the larva of an undetermined *Tabanus*, description of the pupa; description of the larva, pupa, and imago of *Midas fulvipes* n. sp., habits of its larva. On pp. 309–318 descriptions of several new species, with brief notes of food-habits, etc., are reprinted from various agricultural journals.

41. WALSH, B. D. On dimorphism in the hymenopterous genus *Cynips*; with an appendix containing hints for a new classification of *Cynipidæ* and a list of *Cynipidæ*, including descriptions of several new species, inhabiting the oak-galls of Illinois. <Proc. Ent. Soc. Phil., March, 1864, v. 2, pp. 443–500, fig.

Detailed observations proving the frequent occurrence of dimorphism in the *Cynipidæ; Cynips* [=*Amphibolips*] *aciculata*, a dimorphic form of *C. q. spongifica;* concludes from analogy "that *aciculata* ♀ generates galls which produce by parthenogenesis ♂ *spongifica* exclusively, and that ♀ ♀ *spongifica* coupling in June with these ♂ ♂ oviposit in the same month in the young buds of the oak, the eggs lying dormant till the following spring, when some of the eggs produce ♀ *spongifica* in June, and some ♀ *aciculata* in the autumn or early in the following spring, which last in their turn, as before mentioned, generate ♂ *spongifica* to appear in the following June;" interesting details concerning the history of the group are given; relations between the true gall-flies (*Psenides*) and parasitic *Cynipidæ* (*Inquilinæ*); classification and characters of the same; anatomical structure and homologies of the family; the list includes fifteen (15) species inhabiting the various oaks, with descriptions of their galls and of several new species; seven (7) species of *Inquilinæ* are described; for the new species, see the *Systematic Index;* the figures illustrate the anatomy of the abdomen and ovipositor.

42. WALSH, B. D. The four-humped Curculio. A new foe of the apple. <Valley Farmer. Reprint: <Prairie Farmer, 27 August, 1864, [v. 30], n. s., v. 14, p. 131, 2 figs. S.-b., No. 1, p. 28.

Description and figures of *Anthonomus quadrigibbus*, a foe of the apple; comparison with *Conotrachelus nenuphar* and *Anthonomus prunicida* [=*Coccotorus scutellaris*].

43. **Walsh, B. D.** On the pupa of the ephemerinous genus *Bœtisca* Walsh. <Proc. Ent. Soc. Phil., August, 1864, v. 3, pp. 200–206, fig.

Description and figures of the pupa of *Bœtisca obesa* Say.

44. **Walsh, B. D.** On certain entomological speculations of the New England school of naturalists. <Proc. Ent. Soc. Phil., August–September, 1864, v. 3, pp. 207–249.

Discussion of statements, chiefly by Prof. L. Agassiz, upon questions in general entomology. The memoir is divided into sections; in the first, the distribution of insects in North America is discussed in opposition to the views of Agassiz; in the second section the Darwinian theory of the origin of species is discussed and some remarks on the variation of several species are added; in the third and fourth sections the statements of Prof. Agassiz regarding the worm-like larva stage of insects and the resemblances between the pupæ of insects and the Crustacea are discussed and criticised; in the fifth section the author argues that the relative rank of the different orders of insects must be determined from a consideration of all the characters of each order and not from the significance of any one character; the sixth section is a review of Dana's classification of insects on the principle of cephalization; and in the seventh section several erroneous statements and generalizations in the same author's paper on classification are pointed out.

45. **Walsh, B. D.** On phytophagic varieties and phytophagic species. <Proc. Ent. Soc. Phil., November, 1864, v. 3, pp. 403–430.

Many species feed exclusively upon a single food-plant, while other species feed upon many kinds; correlated with this are certain larval or imaginal differences; when these different forms interbreed they are considered the same species and are termed phytophagic varieties; these when separated with a single kind of food-plant form phytophagic races, and these again by a continuation of their isolation form phytophagic species. Phytophagous forms are most abundant where the imago is wingless. *Diapheromera velii*, *Tingis* [=*Gargaphia*] *tiliæ*, and *T.* [=*G.*] *amorphæ* are described as new; the following are mentioned in the remarks upon species and varieties: *Haltica* [=*Disonycha*] *alternata*, *Chrysomela scalaris*, *Clytus* [=*Cyllene*] *robiniæ*, *C.* [=*C.*] *pictus*, *Dryocampa* [=*Sphingicampa*] *bicolor*, *Sphingicampa distigma* [=*bicolor*], *Bombyx* [= *Sericaria*] *mori*, *Halisidota tessellaris*, *H caryæ*, *H. antiphola* [=*tessellaris*], *Cynips* [=*Amphibolips*] *q. spongifica*, *C.* [=*Andricus*] *q. punctata*, *C.* [=*A.*] *q. podagræ*, and *C.* [=*Amphibolips*] *q. inanis*.

46. **Walsh, B. D.** On the insects, coleopterous, hymenopterous, and dipterous, inhabiting the galls of certain species of willow. Part 1st—Diptera. <Proc. Ent. Soc. Phil., December, 1864, v. 3, pp. 543–644.

Structural characters, habits, metamorphoses, etc., of *Cecidomyidæ;* remarks on the unity of habits in genera; synopsis of cecidomyidous galls of *Salix;* descriptions of new species, their galls and inquilines; for a list of the new species, see the *Systematic Index.* See No. 197 for Part 2d.

47. **Walsh, B. D.** The borer. <Colman's Rural World. Reprint: <Prairie Farmer, 6 May, 1865, v. 15, p. 355.

Notice of soap as a means against borers.

48. WALSH, B. D. The new potato-bug and its natural history. <Pract. Ent., 30 October, 1865, v. 1, pp. 1–4.

Record of the spread eastwards of *Doryphora* 10-*lineata*; description of the egg; food-plants, enemies, and means against the same; comparative characters of *D. juncta* and *D.* 10-*lineata;* species of *Meloidæ* injurious to the potato.

49. [WALSH, B. D.] The joint-worm. <Pract. Ent., 27 November, 1865, v. 1, pp. 11, 12.

Reasons for disbelieving that the joint-worm is the larva of one of the *Chalcididæ.*

50. WALSH, B. D. On phytophagic varieties and phytophagic species, with remarks on the unity of coloration in insects. <Proc. Ent. Soc. Phil., November–December, 1865, v. 5, pp. 194–216, fig. See: <Amer. Journ. Sci., September, 1865, ser. 2, v. 40, pp. 282–284. <Ann. and Mag. Nat. Hist., November, 1865, ser. 3, v. 16, pp. 383, 384.

Argues for the origin of races and species by phytophagic isolation; refers to *Datana ministra, D. contracta, Halisidota tessellaris, H. antiphola* [= *H. tessellaris*], *H. harrisii* [= *H. tessellaris*], *Arhopalus* [= *Cyllene*] *pictus, A.* [= *C.*] *robiniæ, A. infaustus* [= *C. decorus*], *Callidium antennatum, C. janthinum, Conotrachelus nenuphar, Doryphora* 10-*lineata*, and *D. juncta*; unity of coloration explained by assumption of a genetic connection between various species; figure showing bullæ on wing of *Ichneumon.*

51. W[ALSH], B. D. [Cicada years.] <Pract. Ent., 25 December, 1865, v. 1, pp. 18–19.

Answer to inquiry of M. S. Hill; Cicada districts of the United States, as given by Fitch in N. Y. Rept. I, p. 39; habits of *C.* [= *Tibicen*] *septendecim.*

52. WALSH, B. D. Insects injurious to vegetation in Illinois. <Trans. Ill. State Agric. Soc., 1865, v. 5, pp. 469–483, figs.

Notes on injurious insects in Illinois in 1861; life-history and ravages of *Leucania unipuncta.*

53. WALSH, B. D. The "Thrips" of the vine-growers. What is it? <Pract. Ent., 25 December, 1865, v. 1, pp. 20–21.

The *Thrips* of fruit-growers probably not a true *Thrips;* food-habits of *Thrips.*

54. WALSH, B. D. The grub-worm. <Colman's Rural World, December, 1865. S.-b., No. 1, p. 51.

Habits, ravages, and means against *Lachnosterna quercina* [= *fusca*]; its larva compared with that of *Ligyrus relictus;* vernacular names of the *Lachnosterna* and of *Allorhina nitida.*

55. WALSH, B. D. Borers. <Pract. Ent., 29 January, 1866, v. 1, pp. 25–31, figs. 1–8.

Remarks on the name "borer;" figures, natural history, and means against *Saperda bivittata* [= *candida*], *Chrysobothris femorata, Bostrichus* [= *Amphicerus*] *bicaudatus, Ægeria* [= *Sannina*] *exitiosa, A. tipuliformis, Clytus* [= *Cyllene*] *robiniæ, C.* [= *C.*] *pictus*, and *Cerasphorus* [= *Chion*] *cinctus*; need of State aid against injurious insects.

56. [WALSH, B. D.] [*Attagenus?* injuring feathers.] <Pract. Ent., 26 February, 1866, v. 1, p. 34.

Answer to inquiry of R. Parnell; ravages of and means against *Dermestidæ*.

57. [WALSH, B. D.] [Codling moth.] <Pract. Ent., 26 February, 1866, v. 1, p. 34.

Answer to inquiry of Isaac Hicks; natural history and means against *Carpocapsa pomonella*.

58. [WALSH, B. D.] [*Aphididæ*.] <Pract. Ent., 26 February, 1866, v. 1, p. 34.

Answer to inquiry of J. H. Foster, jr.; comparative characters of *Eriosoma* [=*Schizoneura*] *lanigera* and *Pemphigus pyri* [=*Schizoneura lanigera*].

59. [WALSH, B. D.] [Mites mistaken for plant-lice.] <Pract. Ent., 26 February, 1866, v. 1, p. 34.

Answer to inquiry of W. M. Smith; distinctive characters of Insecta and Arachnida; description and habitat of the eggs of *Aphis mali*.

60. [WALSH, B. D.] [Saddle-back caterpillar.] <Pract. Ent., 26 February, 1866, v. 1, p. 34.

Answer to inquiry of S. P. M.; description of the larva and imago of *Empretia stimulea;* urticating properties of the larva.

61. W[ALSH], B. D. [Red-humped prominent.] <Pract. Ent., 26 February, 1866, v. 1, p. 35.

Answer to inquiry of E. D. Wright; life-habits of *Notodonta* [= *Œdemasia*] *concinna*.

62. WALSH, B. D. The joint-worm. <Pract. Ent., 26 February, 1866, v. 1, pp. 37–38.

Habitats of the larva of *Cecidomyia destructor* and of *Eurytoma* sp.; criticism of A. Fitch's report upon the latter.

63. W[ALSH, B. D.]. Entomology all a humbug. <Pract. Ent., 26 February, 1866, v. 1, p. 39.

Fewness of entomologists and the multiplicity of their duties the reason why so little has been effected against noxious insects.

64. W[ALSH], B. D. [Cocoons of Ichneumon-flies.] <Pract. Ent., 26 March, 1866, v. 1, p. 46.

Answer to inquiry of M. S. Hill; life-habits of the *Microgasters*.

65. W[ALSH], B. D. [Mass of eggs.] <Pract. Ent., 26 March, 1866, v. 1, p. 46.

Answer to inquiry of T. R. Payne; characters and life-habits of *Orgyia leucostigma*.

66. [WALSH, B. D.] [Apple-tree caterpillar; parasites.] <Pract. Ent., 26 March, 1866, v. 1, p. 46.

Answer to inquiries of G. E. Brackett; food-plants of *Clisiocampa americana;* characters and habits of *Tachinidæ;* habits of secondary parasites.

67. W[ALSH], B. D. Apple-tree borers. <Pract. Ent., 26 March, 1866, v. 1, p. 47.

Reprint, with remarks, of "Apple-tree borers" (Journ. of Commerce); extract from A. Fitch, of larval habits of *Saperda bivittata* [= *candida*].

68. **Walsh, B. D.** The white grub. <Pract. Ent., 30 April, 1866, v. 1, pp. 60–62.

Descriptions and habits of the larval states of *Lachnosterna quercina* [=*fusca*] and *Ligyrus relictus;* ravages and food-habits of the former; the hog as a white-grub destroyer.

69. **Walsh, B. D.** [Apple-tree scales.] <Pract. Ent., 30 April, 1866, v. 1, p. 64.

Answer to inquiry of L. S. Pennington; descriptions and ravages of *Mytilaspis pomorum* and *Chionaspis furfurus; Coccinellidæ* as a means against the former; petroleum as a remedy against bark-lice.

70. **Walsh, B. D.** [Clothes-moths.] <Pract. Ent., 30 April 1866, v. 1, p. 64.

Answer to inquiry of S. Canby; habits and means against *Tineidæ.*

71. **Walsh, B. D.** [Poplar borer.] <Pract. Ent., 30 April, 1866, v. 1, p. 64.

Answer to inquiry of P. C. Truman; larva and imago of *Saperda calcarata* infesting cottonwood.

72. **Walsh, B. D.** [Worms in flour and rye.] <Pract. Ent., 30 April, 1866, v. 1, p. 64.

Answer to inquiry of L. D. Hunt; descriptions and habits of *Tenebrio molitor* and *Dermestes lardarius.*

73. **Walsh, B. D.** Popular remedies for noxious insects. <Pract. Ent., 28 May, 1866, v. 1, pp. 71–74.

Criticism of various worthless remedies against injurious insects.

74. **Walsh, B. D.** [*Serica iricolor* Say.] <Pract. Ent., 28 May, 1866, v. 1, p. 77.

Answer to inquiry of B. F. Seibert; description, ravages, and habitat of *Serica iricolor.*

75. **Walsh, B. D.** [Measuring-worms.] <Pract. Ent., 28 May, 1866, v. 1, p. 77.

Answer to inquiry of T. Siveter; habits of *Ennomos magnaria* [=*alniaria*]; food-plants, habits, and means against *E.* [=*Eudalimia*] *subsignaria* and *Anisopteryx* [=*Paleacrita*] *vernata.*

76. **Walsh, B. D.** [*Lygus pratensis.*] <Pract. Ent., 25 May, 1866, v. 1, pp. 77–78.

Answer to inquiry of H. B. Howarth; habits and odors of *Lygus pratensis;* changes insects pass through.

77. **Walsh, B. D.** [Apple-tree insects.] <Pract. Ent., 28 May, 1866, v. 1, p. 78.

Answer to inquiry of C. Cooke; an unnamed tineid moth raised from cocoons off twigs of apple-tree; *Hemiteles* sp. and *Microgaster* sp. bred from cocoons attached to eggs of *Clisiocampa americana.*

78. **Walsh, B. D.** [Destructive currant-worm.] <Pract. Ent., 28 May, 1866, v. 1, p. 78.

Answer to inquiry of W. M. Smith; cocoon and sexual characters of *Nematus ribis* [= *ribesii*].

79. **Walsh, B. D.** [Egg slits made by Homoptera.] <Pract. Ent., 28 May, 1866, v. 1, p. 78.

Answer to inquiry of C. Dadant; slits in pear-twigs caused by *Chloroneura malefica* [=*Empoasca viridescens*]; *Proconia* [=*Oncometopia*] *undata* oviposits in grape-vines.

80. **Walsh, B. D.** [Plant-lice.] <Pract. Ent., 28 May, 1866, v. 1, p. 78.

Answer to inquiry of J. Flournoy; characters, habits, enemies, and means against *Aphididæ*.

81. **Walsh, B. D.** [Insects injuring plum-trees.] <Pract. Ent., 28 May, 1866, v. 1, p. 78.

Answer to inquiry of A. C. Hammond; *Ægeria* [=*Sannina*] *exitiosa* and an elaterid larva attacking plum-trees; the latter probably attracted by decayed matter, the work of the peach borer.

82. **Walsh, B. D.** Prof. Dana and his entomological speculations. <Proc. Ent. Soc. Phil., May–June, 1866, v. 6, pp. 116–121.

Rejoinder to J. D. Dana's reply to criticism upon the classification of insects.

83. **Walsh, B. D.** Clover-worms. <Pract. Ent., 25 June, 1866, v. 1, pp. 82–83.

Summary of published observations concerning *Asopia costalis;* points which need explanation; probable remedy.

84. **Walsh, B. D.** Click-beetles. <Pract. Ent., 25 June, 1866, v. 1, p. 83.

Note to W.'s "Click-beetles;" snapping of *Elateridæ;* Jaeger's Life of N. Am. Insects and Emmons' N. Y. Report unreliable.

85. **Walsh, B. D.** Cut-worms. <Pract. Ent., 25 June, 1866, v. 1, pp. 85–86.

Definition, food-habits, and means against cut-worms; climbing habits; cut-worms in California. See Nos. 229, 281.

86. **Walsh, B. D.** The canker-worm. Finding a mare's nest. <Pract. Ent., 25 June, 1866, v. 1, p. 87.

Criticism of communication in Western Rural; improbability of the report that *Anisopteryx* [=*Paleacrita*] *vernata* deposits her eggs on the ground.

87. **Walsh, B. D.** Driving nails into fruit trees. <Pract. Ent., 25 June, 1866, v. 1, pp. 87–88.

Uselessness of nails as a means against borers; extracts from various sources, with comments.

88. **Walsh, B. D.** The new potato-bug. <Pract. Ent., 25 June, 1866, v. 1, pp. 88–89.

Records *Doryphora* 10-*lineata* at Bloomington and Athens, Ill.; rate of its eastern progress; need of legislative action against injurious insects.

89. **Walsh, B. D.** [The painted borer.] <Pract. Ent., 25 June, 1866, v. 1, p. 89.

Answer to inquiry of T. C. Wright; sexual difference in the antennæ of *Clytus* [= *Cyllene*] *pictus* bred from hickory.

90. WALSH, B. D. [Bug allied to the chinch-bug.] <Pract. Ent., 25 June, 1866, v. 1, p. 89.

Answer to inquiry of H. B. Howarth; comparative characters of *Blissus leucopterus* and an unnamed lygæid of similar habits.

91. WALSH, B. D. [Canker-worms.] <Pract. Ent., 25 June, 1866, v. 1, p. 89.

Answer to inquiry of C. H. W. Wood; means against *Anisopteryx.*

92. WALSH, B. D. [Apple-tree tineid.] <Pract. Ent., 25 June, 1866, v. 1, p. 89.

Answer to inquiry of C. Cooke; food-plant of *Bucculatrix pomifoliella.*

93. WALSH, B. D. [Spittle insect.] <Pract. Ent., 25 June, 1866, v. 1, p. 89.

Answer to inquiry of M. V. B. Hathaway; life-habits of species of *Aphrophora.*

94. WALSH, B. D. [Insects named.] <Pract. Ent., 25 June, 1866, v. 1, p. 89.

Answer to inquiry of E. Hall; occurrence of *Doryphora* 10-*lineata* at Athens, Ill.; *Hippodamia* [= *Megilla*] *maculata* devours the eggs of the same; two species of *Cassida* affect the sweet-potato.

95. WALSH, B. D. [Longicorn borers.] <Pract. Ent., 25 June, 1866, v. 1, p. 90.

Answer to inquiry of Dr. Trimble; food-habits of *Orthosoma cylindricum,* [= *brunneum*], *Prionus laticollis,* and *P. imbricornis.*

96. WALSH, B. D. [Canker-worms.] <Pract. Ent., 25 June, 1866, v. 1, p. 90.

Answer to inquiry of F. K. Phœnix; season of oviposition of *Anisopteryx.*

97. WALSH, B. D. [White-pine scale.] <Pract. Ent., 25 June, 1866, v. 1, p. 90.

Answer to inquiry of H. Shimer; *Aspidiotus* [= *Chionaspis*] *pinifolii* infesting *Pinus strobus.*

98. WALSH, B. D. Doctors differ. <Pract. Ent., 30 July, 1866, v. 1, p. 96.

Criticism of communications in agricultural papers; tanners' oil injurious to trees; sulphur plugged in trees does not protect the leaves; sheep in an orchard do not keep away *Conotrachelus nenuphar.*

99. WALSH, B. D. The grain plant-louse. <Pract. Ent., 30 July, 1866, v. 1, pp. 96–97.

The insect attacking small grains in Georgia is probably a plant-louse.

100. WALSH, B. D. Popular names for insects. <Pract. Ent., 30 July, 1866, v. 1, p. 97.

The use of the same vernacular name for different insects causes uncertainty in identifying and in suggesting means against injurious insects.

101. WALSH, B. D. Scientific names. <Pract. Ent., 30 July, 1866, v. 1, pp. 97–99.

Explains the necessity of using Latin for scientific names.

102. WALSH, B. D. [Grape-vine insects.] <Pract. Ent., 30 July, 1866, v. 1, pp. 99–100.

Answer to inquiry of C. S. Jackson; habits of an undescribed *Fidia;* injuries to vines by plant-louse (*Aphis vitis?*); enemies of *Aphididæ.*

103. WALSH, B. D. [Wire-worms.] <Pract. Ent., 30 July, 1866, v. 1, p. 100.

Answer to inquiry of A. D. Chesebro; summer fallowing as a means against wire-worms.

104. WALSH, B. D. [Bark-lice.] <Pract. Ent., 30 July, 1866, v. 1, p. 100.

Answer to inquiry of L. E. Harmon; life-history and means against *Coccidæ.*

105. WALSH, B. D. [Tortoise beetles.] <Pract. Ent., 30 July, 1866, v. 1, p. 100.

Answer to inquiry of C. K. Yant; food-plants and larval habits of *Cassididæ.*

106. WALSH, B. D. [Grape bark-louse.] <Pract. Ent., 30 July, 1866, v. 1, p. 100.

Answer to inquiry of J. Bird; description and ravages of *Lecanium* [=*Pulvinaria*] *vitis.*

107. WALSH, B. D. [Plum bark-louse.] <Pract. Ent., 30 July, 1866, v. 1, p. 100.

Answer to inquiry of O. B. Douglas; description of *Lecanium* sp.

108. WALSH, B. D. [Saw-fly eggs.] <Pract. Ent., 30 July, 1866, v. 1, p. 100.

Answer to inquiry of L. D. Morse; position of saw-fly eggs on oak-leaf; characters of the larvæ of *Tenthredinidæ.*

109. WALSH, B. D. [Wheat midge.] <Pract. Ent., 30 July, 1866, v. 1, p. 101.

Answer to inquiry of R. F.; ravages, description, habits, and means against *Cecidomyia* [=*Diplosis*] *tritici.*

110. WALSH, B. D. [Wheat midge.] <Pract. Ent., 30 July, 1866, v. 1, p. 101.

Answer to inquiry of M. H. Boye; *Cecidomyia* [=*Diplosis*] *tritici* not infrequently passes from larval to imaginal state in the same season; means against the same.

111. WALSH, B. D. [Grape galls.] <Pract. Ent., 30 July, 1866, v. 1, p. 101.

Answer to inquiry of J. H. Foster, jr.; description of the galls and larvæ of *Cecidomyidæ.*

112. WALSH. B. D. [Apple-tree web-caterpillar.] <Pract. Ent., 30 July, 1866, v. 1, p. 101.

Answer to inquiry of Marion Hobart; description of the eggs of *Clisiocampa americana;* food-plants of the same and of *Hyphantria textor* [=*cunea*].

113. WALSH, B. D. [Grape-vine beetles.] <Pract. Ent., 30 July, 1866, v. 1, p. 101.

Answer to inquiry of M. S. Hill; food-habits of the larva and imago of *Pelidnota punctata* and of *Anomala lucicola*.

114. WALSH, B. D. [Bot-flies.] <Pract. Ent., 30 July, 1866, v. 1, p. 102.

Answer to inquiry of J. B. Fisher; habits and hosts of several species of *Œstridæ;* parasite infesting *Triplax* [= *Tritoma*] *thoracica*. See No. 153.

115. WALSH, B. D. [Spruce-tree saw-flies.] <Pract. Ent., 30 July, 1866, v. 1, p. 102.

Answer to inquiry of J. Barratt; description of cocoon and imago of *Lophyrus abietis;* means against the same. See Pract. Ent., v. 1, p. 114.

116. WALSH, B. D. [Stings of insects.] <Pract. Ent., 30 July, 1866, v. 1, p. 102.

Answer to inquiry of A. O. Brickman; effects of the stings of bees and other insects.

117. WALSH, B. D. [Blackberry scale.] <Pract. Ent., 30 July, 1866, v. 1, p. 102.

Answer to inquiry of G. E. Brackett; characters of *Lecanium* sp. infesting blackberry.

118. WALSH, B. D. [Eggs in sumach.] <Pract. Ent., 30 July, 1866, v. 1, p. 102.

Answer to inquiry of W. M. Smith; eggs of *Orchelimum* sp.? or *Xiphidium* sp.? in pith of sumach.

119. W[ALSH], B. D. The "new potato-bug" in Maine. <Pract. Ent., 27 August, 1866, v. 1, p. 105.

Extract from Maine Farmer, 26 July, 1866, with comments; the larva of *Lema trilineata* mistaken for that of *Doryphora 10-lineata*.

120. WALSH, B. D. [The army-worm.] <Pract. Ent., 27 August, 1866, v. 1, p. 107.

Extract from Western Rural, 21 July, 1866, with comments; army-worm mistaken for canker-worm; need of precision in using popular names.

121. W[ALSH], B. D. [Fire-cure for potato-beetles.] <Pract. Ent., 27 August, 1866, v. 1, pp. 107–108.

Extract from letter from M. S. Hill, with comments; burning straw effective as a means against *Meloidæ* infesting potato-vines; its use against *Doryphora 10-lineata;* hot water as a means against the onion-maggot and peach-borer.

122. WALSH, B. D. A new humbug. <Pract. Ent., 27 August, 1866, v. 1, pp. 108–110.

Exposure of proposed remedy against *Cecidomyia destructor;* life-habits of the same.

123. W[ALSH], B. D. The striped bug. <Pract. Ent., 27 August, 1866, v. 1, p. 110, figs. 1, 2.

Extract from Western Rural, 21 July, 1866, with comments; characters, habits, means against, and figures of *Diabrotica vittata* and *D. 12-punctata*. See No. 148.

124. **Walsh, B. D.** [Grape-vine caterpillars.] <Pract. Ent., 27 August, 1866, v. 1, p. 111.

Answer to inquiry of B. Borden; description of the early stages of *Procris* [=*Acoloithus*] *falsarius;* characters and habits of the species of *Procris.*

125. **Walsh, B. D.** [Squash-vine insects.] <Pract. Ent., 27 August, 1866, v. 1, p. 111.

Answer to inquiry of J. Cope; description and habits of *Epilachna borealis*; habits of *Coccinellidæ;* description and means against the larva of *Trochilium cucurbitæ* [=*Melittia ceto*].

126. **Walsh, B. D.** [Injurious insects.] <Pract. Ent., 27 August, 1866, v. 1, p. 111.

Answer to inquiry of T. Conard; larval habits and means against *Lema trilineata;* work of the grain plant-louse (*Nectarophora granaria*) and of *Trochilium cucurbitæ* [=*Melittia ceto*]; mention of some of the enemies of bees.

127. **Walsh, B. D.** [Grape-leaf galls.] <Pract. Ent., 27 August, 1866, v. 1, pp. 111, 112.

Answer to inquiry of E. Daggy; description of the leaf-gall of *Phylloxera vitifoliæ* [=*vastatrix*]; reasons for including it in the *Coccidæ;* dipterous enemy of the same. See No. 154.

128. **Walsh, B. D.** [Grape-vine insects.] <Pract. Ent., 27 August, 1866, v. 1, p. 112.

Answer to inquiry of W. H. S.; description and means against an undescribed gall on the tendrils and leaf-stalks of a grape-vine; life-habits of parasitic *Chalcididæ.* See No. 160.

129. **Walsh, B. D.** [Grape-vine beetles.] <Pract. Ent., 27 August, 1866, v. 1, pp. 112, 113.

Answer to inquiry of W. J. Lawrence; food-habits of *Pelidnota punctata* and of *Colaspis flavida.*

130. **Walsh, B. D.** [*Corydalis cornutus.*] <Pract. Ent., 27 August, 1866, v. 1, p. 113.

Answer to inquiry of J. S. Lewis; natural history and habits of *Corydalis cornutus.*

131. **Walsh, B. D.** [Tobacco-moth.] <Pract. Ent., 27 August, 1866, v. 1, p. 113.

Answer to inquiry of F. W. Noble; transformations and food-plants of *Sphinx* [=*Protoparce*] *carolina*; food-plants of *S. 5-maculata* [=*P. celeus*].

132. **Walsh, B. D.** [*Datana ministra.*] <Pract. Ent., 27 August, 1866, v. 1, p. 113.

Answer to inquiry of S. S. Lacy; food-plants and transformations of *Datana ministra.*

133. **Walsh, B. D.** [Grape-vine and fuschia beetles.] <Pract. Ent., 27 August, 1866, v. 1, p. 113.

Answer to inquiry of F. K. Phœnix; *Colaspis flavida* injurious to grape-vine shoots; *Haltica exapta* [=*carinata*] destructive to fuschia; means against flea-beetles.

134. WALSH, B. D. [Blister-beetles.] <Pract. Ent., 27 August, 1866, v. 1, p. 113.

Answer to inquiry of J. Barber; food-plants of *Lytta marginata* [=*Epicauta cinerea*], *L.* [=*E.*] *vittata*, *L. atrata* [=*E. pennsylvanica*], and *L. cinerea* [=*Macrobasis unicolor*].

135. WALSH, B. D. [*Colaspis flavida; Lema trilineata.*] <Pract. Ent., 27 August, 1866, v. 1, p. 114.

Answer to inquiry of J. F. Benner; *Colaspis flavida* destructive to grape-vines; distribution and method of breeding *Lema trilineata.*

136. WALSH, B. D. [Green worms on gooseberries and currants; *Lema trilineata.*] <Pract. Ent., 27 August, 1866, v. 1, p. 114.

Answer to inquiry of H. Burt; gooseberries and currants injured by larva of a saw-fly ?; effects of excessive rain, heat, and drought; food-plants of *Lema trilineata.*

137. WALSH, B. D. [Galls.] <Pract. Ent., 27 August, 1866, v. 1, p. 114.

Answer to inquiry of H. Shimer; note of galls made by *Rhodites radicum*, *Trypeta solidaginis*, and *Thelaxes* [=*Colopha*] *ulmicola.*

138. WALSH, B. D. [Potato and corn insects.] <Pract. Ent., 27 August, 1866, v. 1, p. 114.

Answer to inquiry of T. H. Parsons; scarcity of *Lema trilineata* in Illinois; *Doryphora 10-lineata* destroyed by turkeys, but not by fowls; *Gortyna* sp. ? injurious to young Indian corn; rules for breeding insects.

139. WALSH, B. D. [Cocoons on apple-trees.] <Pract. Ent., 27 August, 1866, v. 1, p. 114.

Answer to inquiry of M. S. Hill; description of cocoon and imago of *Attacus cecropia;* the interaction of organisms.

140. WALSH, B. D. Imported insects; the gooseberry saw-fly. <Pract. Ent., 29 September, 1866, v. 1, pp. 117–125, fig.

List of some injurious European insects imported into America and of American insects imported into Europe; reasons for the increase and abundance of noxious European insects in America, and why American species do not flourish in Europe; natural history, description, and means against *Nematus ventricosus* [=*ribesii*]; figure of currant-leaf, showing method of deposition of eggs and work of larva; natural history and description of larva and imago of *Pristiphora grossulariæ* n. sp.; number of saw-flies infesting the gooseberry and currant in Europe.

141. WALSH, B. D. [Borers.] <Pract. Ent., 29 September, 1866, v. 1, p. 126.

Answer to inquiry of W. H. R. Lykins; western distribution of *Clytus* [=*Cyllene*] *robiniæ.*

142. WALSH, B. D. [Wheat midge.] <Pract. Ent., 29 September, 1866, v. 1, p. 126.

Answer to inquiry of C. P. Wickersham; destructiveness of *Cecidomyia* [=*Diplosis*] *tritici;* nature of its cocoon.

143. WALSH, B. D. [Crickets.] <Pract. Ent., 29 September, 1866, v. 1, p. 126.

Answer to inquiry of Marion Hobart; characters and food-habits of *Acheta* [=*Gryllus*] *abbreviatus*; katydids not exclusively vegetarians; *Œcanthus niveus* found feeding on plant-lice.

144. WALSH, B. D. [Walking-stick.] <Pract. Ent., 29 September, 1866, v. 1, p. 126.

Answer to inquiry of L. W. Taylor; characters and habits of *Spectrum* [=*Diapheromera*] *femorata*.

145. WALSH, B. D. [Apple-tree insects.] <Pract. Ent., 29 September, 1866, v. 1, p. 126.

Answer to inquiry of H. B. Beegle; characters and food-plants of *Limenitis ursula*; description and food-plants of the larva of *Lagoa opercularis*; characters of the imago.

146. WALSH, B. D. [Mites on grasshoppers.] <Pract. Ent., 29 September, 1866, v. 1, p. 126.

Answer to inquiry of W. Riddell; *Astoma* [=*Trombidium*] *locustarum* infesting *Caloptenus femur-rubrum*.

147. W[ALSH], B. D. Grasshoppers and locusts. <Pract. Ent., October, 1866, v. 2, pp. 1–5, 22.

Description, migration, and ravages of *Caloptenus spretus;* limits of its range and means of preventing its increase; confusion caused by the use of popular names of insects. On p. 22 a "note," accidentally omitted, gives the comparative length of the wing-covers and antennæ of *Caloptenus spretus* and *C. femur-rubrum*.

148. W[ALSH], B. D. The striped cucumber-bug. <Pract. Ent., October, 1866, v. 2, p. 5.

Diabrotica vittata attacks German asters. See No. 123.

149. W[ALSH], B. D. Fire-blight. <Pract. Ent., October, 1866, v. 2, p. 7.

Extract from Horticulturist, with comments; cause of fire-blight unknown; not produced by *Scolytus* [=*Xyleborus*] *pyri*.

150. W[ALSH], B. D. The Hessian fly. <Pract. Ent., October, 1866, v. 2, p. 7.

Extract from Colman's Rural World, with comments; late sowing as a means against *Cecidomyia destructor*.

151. [WALSH, B. D.] [Injurious caterpillars; plant-lice enemies.] <Pract. Ent., October, 1866, v. 2, pp. 7–8.

Answer to inquiry of T. McGraw; habits, descriptions, and food-plants of larva of *Dryocampa senatoria* and of *Datana ministra*; food-habits of larva allied to *D. ministra*; description and habits of larva of *Scymnus* sp.; *S. hæmorrhous?* bred from gall of *Thelaxes* [=*Colopha*] *ulmicola*.

152. [WALSH, B. D.] [Tomato-worm.] <Pract. Ent., October, 1866, v. 2, p. 8.

Answer to inquiry of A. A. Jackson; description of the larva and pupa of *Protoparce celeus*; food-plants and harmlessness of the larva.

153. [WALSH, B. D.] [Dipterous larva on swallows.] <Pract. Ent., October, 1866, v. 2, p. 8.

Answer to inquiry of J. B. Fisher; larvæ found *on* swallows (see No. 114) belong to the *Muscidæ* and not to the *Œstridæ;* extract from letter of Osten Sacken on larval habits of *Muscidæ* found *with* birds.

154. [WALSH, B. D.] [Bark-louse enemy.] <Pract. Ent., October, 1866, v. 2, p. 8.

Answer to inquiry of E. Daggy; see No. 127; according to Osten Sacken the bark-louse enemy belongs to *Leucopis;* systematic position of the genus.

155. [WALSH, B. D.] [Parasitized tomato-worm.] <Pract. Ent., October, 1866, v. 2, pp. 8–9.

Answer to inquiry of T. C. Wright; habits of *Microgaster*, parasitic on *Protoparce celeus;* habits of ichneumonized larvæ.

156. [WALSH, B. D.] [Beetles on buttercup and azalea.] <Pract. Ent., October, 1866, v. 2, p. 9.

Answer to inquiry of C. H. Peck; identification of *Galeruca* [=*Adimonia*] *rufosanguinea*, found on *Ranunculus acris*, and of *Prasocuris varipes* on *Azalea nudiflora;* synoptic table, by J. L. Leconte, of the species of *Prasocuris.*

157. [WALSH, B. D.] [Flying-bug.] <Pract. Ent., October, 1866, v. 2, p. 9.

Answer to inquiry of E. E. Sheldon; *Aphodius* mistaken for *Cecidomyia destructor.*

158. [WALSH, B. D.] [Parasitic cocoon.] <Pract. Ent., October, 1866, v. 2, p. 9.

Answer to inquiry of H. W. Howarth; description of cocoons made by *Microgaster* and *Pezomachus;* habits of *Ichneumonidæ.*

159. [WALSH, B. D.] [Oak-bark louse.] <Pract. Ent., October, 1866, v. 2, p. 9.

Answer to inquiry of T. Meehan; undetermined *Coccus* on red-oak.

160. [WALSH, B. D.] [Grape-galls.] <Pract. Ent., October, 1866, v. 2, p. 9.

Answer to inquiry of W. H. S.; see No. 128; larva of *Leucopis* sp., an enemy to grape-vine gall-louse; probable identity of the maker of the tendril and leaf-galls; varieties of grape infested by *Phylloxera vastatrix.*

161. [WALSH, B. D.] ["Saddle-back."] <Pract. Ent., October, 1866, v. 2, p. 9.

Answer to inquiry of T. M. Harvey; food-plants, description, and urticating properties of *Empretia stimulea.*

162. [WALSH, B. D.] [Corn-worm.] <Pract. Ent., October, 1866, v. 2, p. 9.

Answer to inquiry of J. B. Ellis; method of work of two lepidopterous larvæ.

163. [WALSH, B. D.] [Insects named.] <Pract. Ent., October, 1866, v. 2, p. 10.

Answer to inquiry of W. C. Fish; comparative characters of *Entilia sinuata* and *E.* [=*Publilia*] *concava.*

164. [WALSH, B. D.] [Grape insects.] <Pract. Ent., October, 1866, v. 2, p. 10.

Answer to inquiry of J. H. Garman; description and habits of larva of *Procris* [= *Harrisina*] *americana; Proconia* [= *Oncometopia*] *undata* and several species of *Erythroneura* [= *Typhlocyba*] as grape enemies.

165. [WALSH, B. D.] [*Datana ministra.*] <Pract. Ent., October, 1866, v. 2, p. 10.

Answer to inquiry of J. B.; increase of injuries caused by *Datana ministra;* distinctive characters of the larvæ of *Geometridæ.*

166. [WALSH, B. D.] [*Iulus marginatus.*] <Pract. Ent., October, 1866, v. 2, p. 10.

Answer to inquiry of T. Wiggins; characters and food of *Iulus* [= *Spirobolus*] *marginatus.*

167. [WALSH, B. D.] [Midge.] <Pract. Ent., October, 1866, v. 2, p. 10.

Answer to inquiry of W. G. Morris; characters and habits of the larva and imago of *Chironomus* sp.

168. [WALSH, B. D.] [Rat-tailed larva.] <Pract. Ent., October, 1866, v. 2, p. 10.

Answer to inquiry of J. A. Lapham; characters and habitats of the larvæ of rat-tailed *Syrphidæ.*

169. [WALSH, B. D.] [Beetle on thistle.] <Pract. Ent., October, 1866, v. 2, p. 10.

Answer to inquiry of W. S. Robertson; characters and food-plants of *Phyllobrotica* [= *Diabrotica*] *longicornis.*

170. [WALSH, B. D.] [Grape-vine *Aphis.*] <Pract. Ent., October, 1866, v. 2, p. 10.

Answer to inquiry of H.; grape-vine injured by *Aphis vitis.*

171. W[ALSH], B. D. The new potato-bug. <Pract. Ent., November, 1866, v. 2, pp. 13–16, fig.

Eastern progress of *Doryphora* 10-*lineata;* rate of travel; hand-picking the only effective remedy; description of a horse machine for their destruction; pecuniary loss inflicted by the species.

172. W[ALSH], B. D. The canker-worm <Pract. Ent., November, 1866, v. 2, p. 16.

Tarring trees effective against *Paleacrita vernata.*

173. W[ALSH], B. D. The canker-worm again. <Pract. Ent., November, 1866, v. 2, pp. 16–17.

Critical review of article in New England Farmer; value of tarring as a means against *Paleacrita vernata.*

174. WALSH, B. D. Notes by Benj. D. Walsh. <Pract. Ent., November, 1866, v. 2, pp. 19–20.

Remarks on statement of H. Shimer in his paper, "The grape leaf gall-coccus" (Pract. Ent., pp. 17–19); number of eggs to each ♀; tendril and leaf-galls probably produced by the same insect; old leaves entirely free from bark-lice by the end of summer; characters of the pupa of *Leucopis;* systematic position and food-habits of *Thysanoptera;* criticism of paper by H. Shimer in Prairie Farmer, 3 November, 1861.

175. W[ALSH], B. D. The striped bug. <Pract. Ent., November, 1866, v. 2, p. 20.

Remarks on note by A.; effects of plaster as a means against *Diabrotica vittata.*

176. [WALSH, B. D.] [Currant insects; *Psocus venosus.*] <Pract. Ent., November, 1866, v. 2, p. 20.

Answer to inquiry of I. Hicks; occurrence of *Pristiphora grossulariæ* in the Eastern States; *Ellopia* [=*Eufitchia*] *ribearia* injurious to currant; date of introduction of "sulphur-cure" on peach-trees; characters and habits of *Psocus venosus.*

177. [WALSH, B. D.] [Worm in apple.] <Pract. Ent., November, 1866, v. 2, pp. 20–21.

Answer to inquiry of C. Ward; description and ravages of larva of *Trypeta pomonella?*

178. [WALSH, B. D.] [Insects attracted to light.] <Pract. Ent., November, 1866, v. 2, p. 21.

Answer to inquiry of Practical Pomologist; conditions favorable for attracting insects to light; kinds most frequently attracted; the proportion of injurious species attracted.

179. [WALSH, B. D.] [Zebra caterpillar.] <Pract. Ent., November, 1866, v. 2, p. 21.

Answer to inquiry of J. H. Parsons; description of the larva of *Mamestra picta;* times of transformation.

180. [WALSH, B. D.] [Inquiries answered.] <Pract. Ent., November, 1866, v. 2, p. 21.

Answer to inquiry of J. Pettit; identification of several beetles; galls on golden-rod made by *Euryptychia saligneana* and *Trypeta solidaginis;* characters of short-winged form of *Micropus* [=*Blissus*] *leucopterus;* its occurrence in Canada.

181. [WALSH, B. D.] [Worm in corn.] <Pract. Ent., November, 1866, v. 2, pp. 21–22.

Answer to inquiry of J. B. Ellis; description of larva, habits, transformations, and means against an undetermined noctuid.

182. [WALSH, B. D.] [Bag-worms.] <Pract. Ent., November, 1866, v. 2, p. 22.

Answer to inquiry of C. P. Wickersham; characters and synonymy of *Thyridopteryx ephemeræformis.*

183. [WALSH, B. D.] [Ichneumon cocoons.] <Pract. Ent., November, 1866, v. 2, p. 22.

Answer to inquiry of S. A. N.; characters of cocoons of *Microgaster* sp.?

184. WALSH, B. D. Note. <Proc. Ent. Soc. Phil., December, 1866, v. 5, p. 260.

Withdraws assertion attributed to C. R. Osten Sacken.

185. W[ALSH], B. D. The old-fashioned potato-bugs. <Pract. Ent., December, 1866, v. 2, pp. 25–27, figs.

Natural history and means against *Lema trilineata, Lytta* [=*Epicauta*] *vittata, L. atrata* [=*E. pennsylvanica*], *L. marginata* [=*E. cinerea*], and *L. cinerea* [=*Macrobasis unicolor*]; figures *L. trilineata* and *E. vittata.*

186. W[ALSH], B. D. Klippart's wheat plant. <Pract. Ent., December, 1866, v. 2, pp. 27–29.

Adverse criticism of the entomological portion of the above-named book.

187. W[ALSH], B. D. Trimble's insect enemies of fruit and fruit trees. <Pract. Ent., December, 1866, v. 2, pp. 29–30.

Favorable review of the above-named book.

188. W[ALSH], B. D. Answer to the above, by B. D. W. <Pract. Ent., December, 1866, v. 2, pp. 31–33, figs.

Answers to questions asked in J. S. Houghton's "Insects in the Orchard" (Pract. Ent., pp. 30–31); food-habits and hibernation of *Conotrachelus nenuphar*; comparative characters and figures of *Aspidiotus conchiformis* [=*Mytilaspis pomorum*] and *Coccus harrisii* [=*Chionaspis furfurus*]; natural history of *C. harrisii*; means against and enemies of the two species; figures *Chilocorus bivulnerus* and *Hippodamia* [=*Megilla*] *maculata;* food-habits and synonymy of *Lytta* [=*Pomphopœa*] *sayi;* flowing as a means against root-feeding insects; inefficacy of salt, lime, ashes, etc., against the same; insects attacking evergreens not likely to injure fruit trees; cannibal habits of spiders; habits of bees and wasps.

189. [WALSH, B. D.] [Cicada; gooseberry-worm.] <Pract. Ent., December, 1866, v. 2, p. 33.

Answer to inquiry of M. S. Hill; *Cicada* [=*Tibicen*] *septendecim* compared with an undescribed species; ravages of *Pristiphora grossulariæ?* on gooseberry bushes.

190. [WALSH, B. D.] [*Vespidæ.*] <Pract. Ent., December, 1866, v. 2, pp. 33, 34.

Answer to inquiry of M. Hobart; life-habits of *Vespidæ.*

191. [WALSH, B. D.] [Meal-worms: Timber-borers.] <Pract. Ent., December, 1866, v. 2, p. 34.

Answer to inquiry of M. C. D.; characters, food-habits, and means against *Tenebrio molitor* and *T. obscurus;* characters of *Ptinus brunneus* infesting pine timber; corrosive sublimate as a means against timber insects.

192. [WALSH, B. D.] [Corn-worm.] <Pract. Ent., December, 1866, v. 2, p. 34.

Answer to J. B. Ellis; number of broods of *Heliothis armigera* in the Northern and Southern States.

193. [WALSH, B. D.] [Thousand-legged worms.] <Pract. Ent., December, 1866, v. 2, pp. 34–35, fig.

Answer to inquiry of G. W. Robinson; description and figure of *Iulus multistriatus* n. sp. [=*Cambala annulata*]; habits and means against the same.

194. [WALSH, B. D.] [Cranberry-galls, etc.] <Pract. Ent., December, 1866, v. 2, p. 35.

Answer to inquiry of W. C. Fish; occurrence of galls made by *Cecidomyia* sp. on leaves of cranberry; identification of several insects.

195. [WALSH, B. D.] Another humbug. <Pract. Ent., December, 1866, v. 2, p. 35.

Extract, with comments, from Cultivator and Country Gentleman, 22 November, 1866, exposing worthlessness of P. B. Sheldon's composition for destroying borers.

196. [WALSH, B. D.] Notices. <Pract. Ent., December, 1866, v. 2, p. 35.

Mention of several agricultural journals.

197. WALSH, B. D. On the insects, coleopterous, hymenopterous, and dipterous, inhabiting the galls of certain species of willow. Part 2d and last. <Proc. Ent. Soc. Phil., December, 1866–January, 1867, v. 6, pp. 223–288.

See No. 46 for Part 1st. Supplementary notes on the *Cecidomyidæ* (gall-makers and guest-flies); criticism of statements of Fitch and Harris; discussion of structure and habits of *Tenthredinidæ* and insects generally; synopsis of tenthredinidous willow-galls; descriptions of the galls, their makers and inquilines; for the new species described, see the *Systematic Index*; remarks on species and varieties; figures fore-wings of *Tenthredo* and *Ichneumon.*

198. W[ALSH], B. D. Plant-lice—their friends and enemies. <Pract. Ent., January, 1867, v. 2, pp. 37–44, figs.

Method of work and mode of reproduction of *Aphididæ*; their relations to ants; plant-lice enemies; figures *Aphis mali* and several enemies of plant-lice; means against *Aphididæ.*

199. W[ALSH], B. D. Birds *versus* insects. <Pract. Ent., January, 1867, v. 2, pp. 44–47.

Insectivorous birds not necessarily beneficial; a bird must be shown to eat at least thirty (30) times as many injurious insects as it does beneficial ones before it can be considered useful.

200. [WALSH, B. D.] [Insects named.] <Pract. Ent., January, 1867, v. 2, p. 47.

Answer to inquiry of J. Pettit; identification of many species, mostly beetles; characters and food-habits of *Clerus nigripes* [= 4-*guttatus*]; habitat of *Leptura capitata* and *Tingis* [=*Corythuca*] *ciliata.*

201. [WALSH, B. D.] [Apple-tree insects.] <Pract. Ent., January, 1867, v. 2, p. 47.

Answer to inquiry of M. Hobart; increasing distribution of *Aspidiotus conchiformis* [=*Mytilaspis pomorum*]; enemies of the same; characters of the eggs of *Aphis mali.*

202. [WALSH, B. D.] [Work in entomology.] <Pract. Ent., January, 1867, v. 2, p. 47.

Answer to G. Scarborough; advice for the study of entomology by beginners.

203. W[ALSH], B. D. The true *Thrips* and the bogus *Thrips.* <Pract. Ent., February, 1867, v. 2, pp. 49–52, figs.

Natural history, characters, habits, and figures of *Thrips* sp.; characters of the larva and imago of *Haltica chalybea;* figure of imago; habits of species of *Erythroneura* [= *Typhlocyba*]; description and figures of *E.* [=*T.*] *vitis.*

204. W[ALSH], B. D. Universal remedies. <Pract. Ent., 1867, v. 2, p. 52.

Exposure of proposed universal remedy against fruit-tree insects.

205. W[ALSH], B. D. Poisoning noxious insects. <Pract. Ent., February, 1867, v. 2, pp. 52–53.

Sugaring with poison as a means against *Noctuidæ.*

206. W[ALSH], B. D. Remarks by B. D. W. <Pract. Ent., February, 1867, v. 2, p. 54.

Comments on S. S. Rathvon's "Bag-worms" (Pract. Ent., pp. 53–54); distribution and food-plants of *Thyridopteryx ephemeræformis*.

207. W[ALSH], B. D. Habits of the tree-cricket (*Œcanthus niveus*). <Pract. Ent., February, 1867, v. 2, p. 54, figs.

Characters of eggs and method of deposition; characters, food-habits, and figures of the imago.

208. [WALSH, B. D.] Importing European parasites. <Pract. Ent., February, 1867, v. 2, pp. 54–55.

Imaginary correspondence between Asa Fitch and John Curtis on the importation of parasitic insects.

209. [WALSH, B. D.] [Screw-worm.] <Pract. Ent., February, 1867, v. 2, p. 55.

Answer to inquiry of L. D. Morse; undetermined larva found in osage-orange seed; hominivorous habits of *Lucilia macellaria*.

210. [WALSH, B. D.] [*Attacus cecropia*.] <Pract. Ent., February, 1867, v. 2, p. 55.

Answer to inquiry of T. T. Smith; characters of larva and imago of *Attacus cecropia*; food-plants; method of issuance from cocoon; nature of fluid discharged when emerging from cocoon.

211. [WALSH, B. D.] [Apple-worm.] <Pract. Ent., February, 1867, v. 2, pp. 55–56.

Answer to inquiry of W. C. Fish; characters of the pupa of *Sciara mali*.

212. [WALSH, B. D.] [Oak-gall.] <Pract. Ent., February, 1867, v. 2, p. 56.

Answer to inquiry of W. Muir; characters of an undetermined cynipid gall on oak.

213. [WALSH, B. D.] [*Cicada*: Grape-vine *Procris*.] <Pract. Ent., February, 1867, v. 2, p. 56.

Answer to inquiry of M. S. Hill; variations in the imago of *Cicada* [= *Tibicen*] *septendecim* and in the song of the same; characters of the larva of *Procris* [= *Harrisina*] *americana*.

214. [WALSH, B. D.] [*Nitidulidæ*.] <Pract. Ent., February, 1867, v. 2, p. 56.

Answer to inquiry of W. H. S.; food-habits of *Ips fasciatus* and *Nitidula bipustulata*.

215. [WALSH, B. D.] [Turnip enemy.] <Pract. Ent., February, 1867, v. 2, p. 56.

Answer to inquiry of F. T. Pember; characters and food-habits of *Polydesmus complanatus*.

216. [WALSH, B. D.] [Wheat midge.] <Pract. Ent., February, 1867, v. 2, p. 57.

Answer to inquiry of C. P. Wickersham; nature of the membrane enveloping the full-grown larva of *Diplosis tritici*.

217. [WALSH, B. D.] [Queries answered.] <Pract. Ent., February, 1867, v. 2, p. 57.

Answer to inquiry of R. Middleton; toads, frogs, and spiders beneficial; effects of the stings of various insects.

218. [WALSH, B. D.] [Scales.] <Pract. Ent., February, 1867, v. 2, p. 57.

Answer to inquiry of M. M. S.; characters and ravages of scales on oleander and orange; means against *Coccidæ.*

219. [WALSH, B. D.] [Hundred-legged worm.] <Pract. Ent., February, 1867, v. 2, p. 57.

Answer to inquiry of S. P. Monks; identification of *Polydesmus virginiensis*; distinctive characters of Myriapoda.

220. [WALSH, B. D.] [Bark-borers.] <Pract. Ent., February, 1867, v. 2, pp. 57–58.

Answer to inquiry of C. V. Riley; synoptic table and food-habits of several species of *Scolytus*; descriptions of *S. fagi* n. sp. and *S. caryæ* n. sp. [=4-*spinosus*].

221. [WALSH, B. D.] [Aleurodes.] <Pract. Ent., February, 1867, v. 2, p. 58.

Answer to inquiry of D. F. C.; characters and food-plants of an undescribed species of *Aleurodes.*

222. W[ALSH], B. D. The critic criticized. <Pract. Ent., February, 1867, v. 2, p. 58. Answer [by C. V. Riley]. <Prairie Farmer, 16 March, 1867, [v. 35], n. s., v. 19, p. 169. S.-b., No. 2, p. 58.

Criticism of article by C. V. Riley (Prairie Farmer, 19 January, 1867, [v. 35], n. s., v. 19, p. 37).

223. [WALSH, B. D.] Obituary. <Pract. Ent., February, 1867, v. 2, p. 58.

Notice of the late Brackenridge Clemens.

224. W[ALSH], B. D. Wire-worms. <Pract. Ent., March, 1867, v. 2, pp. 61–62, figs.

Characters of Myriapoda and larvæ of *Elateridæ*, popularly called wire-worms; food-habits of larva of *Ludius attenuatus;* figure of larva and imago of the same; confusion caused by the use of the term "wire-worms" by correspondents of the Country Gentleman.

225. W[ALSH], B. D. Imported insects.—The onion-fly. <Pract. Ent., March, 1867, v. 2, p. 64, figs.

Figures of larva and imago of *Anthomyia ceparum* and of *Ortalis* [=*Tritoxa*] *flexa;* comparative characters of imagos; distribution and means against the two species.

226. W[ALSH], B. D. [Means against cut-worms.] <Pract. Ent., March, 1867, v. 2, p. 66.

Recommends, in reply to J. Townley's inquiry, sugaring with poisoned molasses as a means against cut-worms.

227. W[ALSH], B. D. Entomology indeed run mad. <Pract. Ent., March, 1867, v. 2, pp. 66, 67.

Reprint of "The bud-worm" (N. C. Rural Journ., September, 1866), with criticism and correction of some of the errors.

228. W[ALSH], B. D. The imported gooseberry saw-fly. <Pract. Ent., March, 1867, v. 2, p. 67.

Reason for re-appearance in June and for the non-appearance of the second brood of *Nematus ventricosus* [=*ribesii*] in New York in 1866.

229. W[ALSH], B. D. Tree cut-worms. <Pract. Ent., March, 1867, v. 2, p. 67.

Cut-worm described (Pract. Ent., v. 1, pp. 85–86) identified as *Hadena chenopodii* [=*Mamestra trifoli*]. See Nos. 85, 281.

230. W[ALSH], B. D. Doctoring fruit trees again. <Pract. Ent., March, 1867, v. 2, pp. 67, 68.

Extract from Industrial Gazette, 15 December, 1866, with criticism; calomel, sulphur, and substances insoluble in water not absorbed into the circulation of trees.

231. W[ALSH,] B. D. The grape-vine *Colaspis* (*Colaspis flavida* Say). <Pract. Ent., March, 1867, v. 2, pp. 68–69, fig.

Ravages of *Colaspis flavida;* comparison with allied species; remarks on the law of priority and on certain insects becoming suddenly injurious; figures *C. flavida.*

232. W[ALSH], B. D. Another universal remedy. <Pract. Ent., March, 1867, v. 2, p. 69.

Extract from reprint (?) in Cultivator and Country Gentleman, 10 January, 1867, with criticism of proposed remedy against insects injurious to trees.

233. W[ALSH], B. D. Borers. The plug-ugly theory. <Pract. Ent., March, 1867, v. 2, p. 69.

Criticism of theory that a plug driven into a hole in a tree is death to borers.

234. W[ALSH], B. D. A mass of mistakes. <Pract. Ent., March, 1867, v. 2, p. 70.

Correction of errors in "Remedy for the borer" (Prairie Farmer, 9 February, 1867).

235. W[ALSH], B. D. Hop-growing in the West. <Pract. Ent., March, 1867, v. 2, p. 70.

Extract from Country Gentleman, 31 January, 1867, showing ravages of *Phorodon humuli* in Vermont; danger of its introduction into the Western States.

236. W[ALSH], B. D. Thousand-legged worms. <Pract. Ent., March, 1867, v. 2, p. 70.

Extract from letter of J. H. Parsons, with comments; injuries to onions by *Iulus multistriatus* [= *Cambala annulata*]; *I. multistriatus* undistinguishable from *I. cœruleo-cinctus.*

237. W[ALSH], B. D. Fighting the Curculio. <Pract. Ent., March, 1867, v. 2, p. 71.

Extract from Genesee Farmer for 1853, p. 125; ridicule of additions to "jarring" as a means against *Conotrachelus nenuphar.*

238. W[ALSH], B. D. ["Bushels of butterflies."] <Pract. Ent., March, 1867, v. 2, p. 71.

Extract from Cincinnati Gazette, August, 1866, with comments; occurrence of dead imagos of *Attacus cecropia?* in large numbers ("10 bushels") in Newport, Ohio; food-plants of the larva.

239. [WALSH, B. D.] [Scab on potato.] <Pract. Ent., March, 1867, v. 2, pp. 71–72.

Answer to inquiry of T. L. J. Baldwin; account of blister-like scabs on potatoes, probably caused by *Sciara* sp.; means against the same.

240. [WALSH, B. D.] [Mass of eggs.] <Pract. Ent., March, 1867, v. 2, p. 72.

Answer to inquiry of E. Daggy; egg-masses of *Clisiocampa americana;* food-plants of *C. americana* and *C. sylvatica* [=*disstria*].

241. [WALSH, B. D.] [Food of katydids.] <Pract. Ent., March, 1867, v. 2, p. 72.

Answer to inquiry of C. M.; food of *Microcentrum retinervis* largely carnivorous.

242. [WALSH, B. D.] [Caterpillar nest on wild cherry.] <Pract. Ent. March, 1867, v. 2, p. 72.

Answer to inquiry of H. Morey; undetermined larva on wild cherry, food-plants of *Hyphantria textor* [=*cunea*].

243. [WALSH, B. D.] [Insect eggs.] <Pract. Ent., March, 1867, v. 2, p. 72.

Answer to inquiry of P. Ferris; undetermined eggs of Lepidoptera and Hemiptera on apple-tree twigs.

244. [WALSH, B. D.] [*Attacus polyphemus*, etc.] <Pract. Ent., March, 1867, v. 2, pp. 72–73.

Answer to inquiry of M. M. S.; variations in *Attacus* [=*Telea*] *polyphemus;* habits and times of transformations of *Arctia* [=*Pyrrharctia*] *isabella;* references to history of *Dryocampa rubicunda.*

245. [WALSH, B. D.] [*Cossus robiniæ*, etc.] <Pract. Ent., March, 1867, v. 2, p. 73.

Answer to inquiry of J. Townley; food-habits and injuries of *Cossus robiniæ;* result of freezing insects; characters of some wood-borers.

246. [WALSH, B. D.] [Museum pests.] <Pract. Ent., March, 1867, v. 2, p. 73.

Answer to inquiry of F. L. Van Arsdale; means against *Dermestidæ.*

247. [WALSH, B. D.] [Katydid eggs.] <Pract. Ent., March, 1867, v. 2, p. 73.

Answer to C. M. B.; characters of eggs of *Microcentrum retinervis.*

248. [WALSH, B. D.] [Squash-vine borer.] <Pract. Ent., March, 1867, v. 2, p. 73.

Answer to inquiry of E. Nason; ravages and means against *Trochilium cucurbita* [= *Melittia ceto*].

249. [WALSH, B. D.] [Apple-twig borers, etc.] <Pract. Ent., March, 1867, v. 2, pp. 73–74.

Answer to inquiry of A. W. Brumbaugh; work of *Bostrichus* [= *Amphicerus*] *bicaudatus*; characters and habits of *Tæniopteryx fasciata*; ravages, habits, and means against *Macrodactylus subspinosus*.

250. [WALSH, B. D.] [Hessian fly.] <Pract. Ent., March, 1867, v. 2, p. 74.

Answer to inquiry of E. E. Sheldon; hibernation of the larva of *Cecidomyia destructor*.

251. [WALSH, B. D.] [Tree-cricket.] <Pract. Ent., March, 1867, v. 2, p. 74.

Answer to inquiry of J. M. Cole; food-habits of *Œcanthus niveus;* characters of its eggs.

252. [WALSH, B. D.] [Tineids in bee-hives.] <Pract. Ent., March, 1867, v. 2, p. 74.

Answer to inquiry of J. H. Hunt; characters of case and larva of undetermined tineid.

253. W[ALSH], B. D. Jumping to conclusions. <Pract. Ent., March, 1867, v. 2, p. 74.

Criticism of article "THE potato-bug" (Wisconsin Farmer, 2 March, 1867).

254. W[ALSH], B. D. The common Curculio and its allies. <Pract. Ent., April, 1867, v. 2, pp. 75–81.

Characters of the *Rhyncophora*; characters, ravages, life-history, food-habits, number of broods, and means against *Conotrachelus nenuphar*; ravages, habits, characters, and means against *Anthonomus prunicida* [= *Coccotorus scutellaris*] and *A. 4-gibbus*; mention of additional injurious weevils; comparative characters of the three species.

255. W[ALSH], B. D. Remarks by B. D. W. <Pract. Ent., April, 1867, v. 2, p. 82.

Comments on C. V. Riley's article, "The imported apple-tree bark-louse" (Prairie Farmer, 23 March, 1867, [v. 35], n. s., v. 19, p. 184).

256. W[ALSH], B. D. Confessing the corn. <Pract. Ent., April, 1867, v. 2, p. 82.

Acknowledgment of mistake in quoting from Prairie Farmer.

257. [WALSH, B. D.] [*Bibio albipennis*.] <Pract. Ent., April, 1867, v. 2, p. 83.

Answer to inquiry of H. Burt; habits of larvà of *Bibio albipennis*.

258. [WALSH, B. D.] [Lice on horses.] <Pract. Ent., April, 1867, v. 2, p. 83.

Answer to inquiry of L. West; comparative characters of *Pediculina* and *Mallophaga*.

259. [WALSH, B. D.] [Cocoon on wild cherry.] <Pract. Ent., April, 1867, v. 2, p. 83.

Answer to inquiry of A. A. Baker; sexual differences of *Attacus promethea*; food-plants of its larva.

260. [WALSH, B. D.] [Lepidopterous case-bearer.] <Pract. Ent., April, 1867, v. 2, p. 83.

Answer to inquiry of J. H. Hunt; larval characters of case-bearing *Lepidoptera*.

261. [WALSH, B. D.] ["Thousand-legged worms."] <Pract. Ent., April, 1867, v. 2, p. 83.

Answer to inquiry of J. H. Parsons; *Iulus virgatus* eating dead seeds; injurious habits of species of *Polydesmus*.

262. [WALSH, B. D.] [Toads: Glorified squash-bug.] <Pract. Ent., 1867, v. 2, p. 83.

Answer to inquiry of F. C. Hill; food of toads; poisonousness of *Prionotus novenarius* [= *Prionidus cristatus*].

263. [WALSH, B. D.] [Galls on blackberry.] <Pract. Ent., April, 1867, v. 2, pp. 83–84.

Answer to inquiry of J. H. Tice; identification of the gall of *Diastrophus nebulosus*; genera of *Cynipidæ* confined to single plants.

264. [WALSH, B. D.] [Bark-lice.] <Pract. Ent., April, 1867, v. 2, p. 84.

Answer to inquiry of Dr. Houghton; comparative harmlessness of *Coccus harrisii* [= *Chionaspis furfurus*]; means against *Coccidæ*.

265. [WALSH, B. D.] [Plant-lice.] <Pract. Ent., April, 1867, v. 2, p. 84.

Answer to inquiry of E. Orton; description of eggs of *Lachnus strobi*; means against *Aphididæ*.

266. [WALSH, B. D.] [Bag-worms.] <Pract. Ent., April, 1867, v. 2, pp. 84–85.

Answer to inquiry of J. Murphy; food-habits and means of dispersal of *Thyridopteryx ephemeræformis*.

267. [WALSH, B. D.] [Insects injurious to grape.] <Pract. Ent., April, 1867, v. 2, p. 85.

Answer to inquiry of J. Wood; supposed Curculio punctures in grapes.

268. [WALSH, B. D.] [*Attacus promethea*.] <Pract. Ent., April, 1867, v. 2, p. 85.

Answer to inquiry of J. B. Lyon; mention of undetermined parasite of *Attacus promethea*.

269. [WALSH, B. D.] [Borer in hickory.] <Pract. Ent., April, 1867, v. 2, p. 85.

Answer to inquiry of B. Norris; characters of young and mature larva of *Clytus* [= *Cyllene*] *pictus*.

270. [WALSH, B. D.] [Apple-tree plant-lice.] <Pract. Ent., April, 1867, v. 2, p. 85.

Answer to inquiry of W. W. Linn; identification of eggs of *Aphis mali*; enemies of the same.

271. [WALSH, B. D.] [Tulip-tree bark-louse: Basket-worm.] <Pract. Ent., April, 1867, v. 2, p. 85.

Answer to inquiry of I. Hicks; parasites and enemies of undescribed bark-louse on tulip-tree; *Thyridopteryx ephemeræformis* destructive to evergreens.

272. W[ALSH], B. D. The grape-vine Fidia. (*Fidia viticida*, new species.) <Pract. Ent., May, 1867, v. 2, pp. 87–88, fig.

Ravages, description, and figure of *Fidia viticida* n. sp.; modification of the clasping organs of insects.

273. W[ALSH], B. D. Enemies of the rice crop. <Pract. Ent., May, 1867, v. 2, p. 89.

Injuries caused by and means adopted against the water-weevil [= *Lissorhoptrus simplex*] and the rice-grub = [*Chalepus trachypygus.*]

274. [WALSH, B. D.] The canker-worm once more. <Pract. Ent., May, 1867, v. 2, p. 89. Abstract: <Cultivator and Country Gentleman, 6 June, 1867, v. 29, p. 370.

Extract from and review of W. G. C.'s "My trials with the canker-worms: remedy" (Iowa Homestead, 13 March, 1867); sorghum as a means against *Anisopteryx.*

275. W[ALSH], B. D. None so blind as those who shut their eyes. <Pract. Ent., May, 1867, v. 2, pp. 89–90.

Criticism of error by editors of agricultural papers; rate of eastward progress of *Doryphora 10-lineata.*

276. W[ALSH], B. D. Self-taught entomologists. <Pract. Ent., May, 1867, v. 2, pp. 91–92.

Criticism of misstatements found in agricultural papers; first occurrence of *Doryphora 10-lineata* in Illinois in 1864.

277. W[ALSH], B. D. Pear-tree and apple-tree insects. <Pract. Ent., May, 1867, v. 2, pp. 92–93.

Food-plants of *Attacus cecropia*, *Clisiocampa americana*, and *Saperda bivittata* [= *candida*].

278. W[ALSH], B. D. More universal remedies. <Pract. Ent., May, 1867, v. 2, p. 93.

Reprint and criticism of "Destruction of insects" (Mo. Rept. Bureau Agric., February, 1867, p. 60).

279. W[ALSH], B. D. Hop-growing in the West. <Pract. Ent., May, 1867, v. 2, pp. 93–94.

Occurrence in Michigan of *Phorodon humuli*; its destructiveness; popular ignorance of entomology.

280. W[ALSH], B. D. The wheat midge—jumping to a conclusion. <Pract. Ent., May, 1867, v. 2, p. 94.

Extract, with comment, from Maryland Farmer and Mechanic, August, 1865; *Diplosis tritici* not infested with parasites in America; food-habits of *Thrips.*

281. W[ALSH], B. D. Tree cut-worms. <Pract. Ent., May, 1867, v. 2, p. 94.

"Dark-sided cut-worm" an *Agrotis* and not *Hadena chenopodii* [= *Mamestra trifolii*]. See Nos. 85, 229.

282. W[ALSH], B. D. Quacks and physicians. <Pract. Ent., May, 1867, v. 2, p. 95.

Criticism of proposed universal remedy against insects injurious to the rose (Western Rural, 30 March, 1867).

283. W[ALSH], B. D. The ephemeron or May-fly. <Pract. Ent., May, 1867, v. 2, p. 95.

Length of duration of life of *Ephemeridæ*.

284. W[ALSH], B. D. A groundless fear. <Pract. Ent., May, 1867, v. 2, p. 95.

Extract from Mo. Rept. Bureau Agric., February, 1867, p. 62; food-habits of larva and imago of *Lytta atrata* [= *Epicauta pennsylvanica*]; places of oviposition.

285. W[ALSH], B. D. Fire-blight. <Pract. Ent., May, 1867, v. 2, p. 96.

Probable cause.

286. [WALSH, B. D.] [Insect eggs.] <Pract. Ent., May, 1867, v. 2, p. 96.

Answer to inquiry of W. Willock; identification of eggs of *Œcanthus niveus* and of one of the *Membracidæ* on grape twigs.

287. [WALSH, B. D.] [*Attacus cecropia*.] <Pract. Ent., May, 1867, v. 2, p. 96.

Answer to inquiry of J. B. H.; characters of *Attacus cecropia*.

288. [WALSH, B. D.] [Twig pruners.] <Pract. Ent., May, 1867, v. 2, p. 96.

Answer to inquiry of M. W. Philips; twigs of pear and other trees amputated in the same manner as oak twigs by *Elaphidion putator* [= *villosum*].

289. [WALSH, B. D.] [Blister-beetles.] <Pract. Ent., May, 1867, v. 2, p. 97.

Answer to inquiry of J. M. Tracy; food-habits, ravages, and means against *Lytta* [= *Pomphopœa*] *ænea*; food-plants of *L.* [= *P.*] *tarsalis*; tabular separation of three species of *Lytta* [= *Pomphopœa*].

290. [WALSH, B. D.] [Means against Curculio: *Œstridæ*.] <Pract. Ent., May, 1867, v. 2, p. 97.

Answer to inquiry of C. Greene; ineffective means against *Conotrachelus nenuphar*; *Œstridæ* infesting the ox and rabbit.

291. [WALSH, B. D.] [Insect eggs.] <Pract. Ent., May, 1867, v. 2, p. 97.

Answer to inquiry of P. Ferris; identification of eggs of *Clisiocampa sylvatica* [= *disstria*] and *Aphis mali*.

292. W[ALSH], B. D. The wheat midge. <Pract. Ent., June, 1867, v. 2, pp. 99-101.

Extract from letter from S. S. Rathvon, with remarks; natural history of *Diplosis tritici.*

293. W[ALSH], B. D. The new or Colorado potato-bug. <Pract. Ent., June, 1867, v. 2, pp. 101-102.

Distribution, habits, and extent of injuries of *Doryphora 10-lineata.*

294. [WALSH, B. D.] [Gall-flies; saw-flies.] <Pract. Ent., June, 1867, v. 2, pp. 102-103.

Answer to inquiry of M. W. Philips; mention of various insects which are gall-makers; their modes of life; characters of the larvæ of *Cecidomyidæ* and *Tenthredinidæ.*

295. [WALSH, B. D.] [Bark-beetles.] <Pract. Ent., June, 1867, v. 2, p. 103.

Answer to inquiry of W. C. Fish; identification of specimens sent; habits of *Tomicus pusillus* [=*Pityophthorus minutissimus*] and of *T. ramulorum* [=*P. micrographus*].

296. [WALSH, B. D.] [Apple-tree insects.] <Pract. Ent., June, 1867, v. 2, p. 103.

Answer to inquiry of S. Cassi; characters, food-plants, and ravages of *Arctia* [=*Spilosoma*] *virginica*; supposed work of *Epicærus imbricatus.*

297. [WALSH, B. D.] [*Attacus cecropia.*] <Pract. Ent., June, 1867, v. 2, p. 103.

Answer to inquiry of T. McGraw; larvæ of *Attacus cecropia* usually solitary.

298. [WALSH, B. D.] [Grape-vine flea-beetle.] <Pract. Ent., June, 1867, v. 2, p. 103.

Answer to inquiry of A. Kelley; hibernation of the imago of *Haltica chalybea;* ravages and means against the same.

299. [WALSH, B. D.] [*Sphyracephala brevicornis.*] <Pract. Ent., June, 1867, v. 2, p. 103.

Answer to inquiry of H. B. Howarth; characters and habitat of *Sphyracephala brevicornis.*

300. [WALSH, B. D.] [May-bug.] <Pract. Ent., June, 1867, v. 2, p. 103.

Answer to inquiry of C. H. R.; characters and food-habits of the larva of *Lachnosterna quercina* [=*fusca*].

301. [WALSH, B. D.] [Blister-beetles: plant-louse enemy.] <Pract. Ent., June, 1867, v. 2, p. 104.

Answer to inquiry of Dr. Houghton; food-habits of *Lytta* [=*Pomphopœa*] *ænea* and *L.* [=*P.*] *sayi*; *Chilocorus bivulnerus* as a means against *Coccidæ.*

302. [WALSH, B. D.] [Blackberry borers.] <Pract. Ent., June, 1867, v. 2, p. 104.

Answer to inquiry of A. S. Fuller; characters of undetermined larva (*Ægeria?*) and of *Oberea perspicillata* [=*bimaculata*] boring in blackberry stems; food-habits of *Ægeridæ.*

303. W[ALSH], B. D. Scientific nomenclature. <Pract. Ent., July, 1867, v. 2, pp. 105–106.

Criticism of the practice of establishing new genera upon slight characters, as illustrated by the American silk-worms.

304. W[ALSH], B. D. Currant plant-lice (*Aphis ribis*). <Pract. Ent., July, 1867, v. 2, p. 106.

Method of work of *Aphis* [=*Myzus*] *ribis*.

305. [WALSH, B. D.] [*Lucanus elaphus.*] <Pract. Ent., July, 1867, v. 2, p. 107.

Answer to inquiry of S. Haycraft; characters and habits of *Lucanus elaphus;* rarity of the ♀; use of prolonged jaws in ♂ insects.

306. [WALSH, B. D.] [New York weevil.] <Pract. Ent., July, 1867, v. 2, p. 107.

Answer to inquiry of T. Gregg; habits and distribution of *Ithycerus noveboracensis.*

307. [WALSH, B. D.] [Codling-moth.] <Pract. Ent., July, 1867, v. 2, p. 107.

Answer to inquiry of H. Morey; number of broods, habits, etc., of *Carpocapsa pomonella.*

308. [WALSH, B. D.] [Hickory borer, etc.] <Pract. Ent., July, 1867, v. 2, p. 107.

Answer to inquiry of T. Wiggins; times of emergence of *Clytus* [=*Cyllene*] *pictus* and *C.* [=*C.*] *robiniæ*; habits of *Corydalus cornutus.*

309. [WALSH, B. D.] [Wasps.] <Pract. Ent., July, 1867, v. 2, p. 107.

Answer to inquiry of G. W. Smith; food-habits of digger-wasps.

310. [WALSH, B. D.] [Parasitic flies, etc.] <Pract. Ent., July, 1867, v. 2, pp. 107–108.

Answer to inquiry of S. P. Monks; method of transformation of parasitic Hymenoptera; use of Latin plurals for English words.

311. [WALSH, B. D.] [Workers among Hymenoptera.] <Pract. Ent., July, 1867, v. 2, p. 108.

Answer to inquiry of W. V. Andrews; economy of workers among the social Hymenoptera.

312. [WALSH, B. D.] [Cut-worms.] <Pract. Ent., July, 1867, v. 2, p. 108.

Answer to inquiry of V. Abbey; means against *Agrotis* sp.?

313. [WALSH, B. D.] [Potato-beetle enemies.] <Pract. Ent., July, 1867, v. 2, p. 108.

Answer to inquiry of W. Smith; scutellerid enemy of larva of *Doryphora* 10-*lineata*; katydids as an enemy of the same.

314. [WALSH, B. D.] [Black-bug.] <Pract. Ent., July, 1867, v. 2, p. 108.

Answer to inquiry of J. R. Tewksbury; characters and habits of *Pirates* [=*Melanolestes*] *picipes.*

315. [WALSH, B. D.] [Burying-beetles.] <Pract. Ent., July, 1867, v. 2, p. 108.

Answer to inquiry of A. D. Strong; characters of *Necrophorus marginatus*; habits of *Silphidæ*; mite parasites of *Silphidæ* and other beetles.

316. [WALSH, B. D.] [Insects named.] <Pract. Ent., July, 1867, v. 2, p. 108.

Answer to inquiry of M. S. Hill; identification of specimens sent; food-plants of larva of *Chrysomela* [=*Gastroidea*] *cyanea*.

317. [WALSH, B. D.] [Spring-tails.] <Pract. Ent., July, 1867, v. 2, pp. 108–109.

Answer to inquiry of E. Daggy; characters, habits, and means against *Poduridæ*.

318. [WALSH, B. D.] [Blackberry gall insects.] <Pract. Ent., July, 1867, v. 2, p. 109.

Answer to inquiry of Aculeus; number of abdominal segments of *Diastrophus* and *Aulax*; reasons for considering the former the gall-maker and the latter the guest-fly.

319. [WALSH, B. D.] [Pine and cedar longicorns.] <Pract. Ent., July, 1867, v. 2, p. 109.

Answer to inquiry of J. Barratt; sexual characters and food-habits of *Callidium antennatum* and *C. janthinium*.

320. [WALSH, B. D.] [White-pine plant-louse, etc.] <Pract. Ent., July, 1867, v. 2, p. 109.

Answer to inquiry of C. H. Peck; *Lachnus strobi* on *Pinus strobus*; undetermined bark-louse, with enormous lateral thoracic plates, found on *Rhus glabra*.

321. [WALSH, B. D.] [Cut-worms.] <Pract. Ent., July, 1867, v. 2, p. 109.

Answer to inquiry of J. Townley; food-habits of climbing cut-worms.

322. [WALSH, B. D.] [Currant plant-louse.] <Pract. Ent., July, 1867, v. 2, pp. 109, 110.

Answer to inquiry of R. L. Walker; *Coccinellidæ* as a means against *Aphis* [=*Myzus*] *ribis*.

323. [WALSH, B. D.] [Beetles.] <Pract. Ent., July, 1867, v. 2, p. 110.

Answer to inquiry of I. A. Plucke; characters and food-habits of *Tetraopes tornator* [=*tetraophthalmus*] and of *T. femoratus*; comparative characters of *Chrysomela bigsbyana* and of *C. philadelphica*; characters of *Chrysomelidæ* and *Coccinellidæ*.

324. W[ALSH], B. D. Fertilizing plants. <Pract. Ent., July, 1867, v. 2, p. 110.

Part played by insects in fertilizing plants.

325. W[ALSH], B. D. The peach-worm. <Pract. Ent., July, 1867, v. 2, p. 110.

Larvæ of *Ephestia zeæ* [=*interpunctella*] injurious to dried peaches; food-plants and enemies of the same.

326. W[ALSH], B. D. Valedictory. <Pract. Ent., August–September, 1867, v. 2, p. 111.

Note of thanks for aid received in editing the Practical Entomologist.

327. W[ALSH], B. D. The State entomologist of Illinois. <Pract. Ent., August–September, 1867, v. 2, p. 111. Reprint: <Can. Farmer, 1 October, 1867, v. 4. S.-b., No. 2, p. 98.

Bill for appointment of State entomologist of Illinois not carried into effect.

328. W[ALSH], B. D. The three so-called army-worms. <Pract. Ent., August–September, 1867, v. 2, pp. 111–114.

Confusion caused by the use of the same popular name for *Anomis* [= *Aletia*] *xylina*, *Leucania unipuncta*, and *Clisiocampa sylvatica* [= *disstria*]; habits, etc., of the three species; food-habits of their larvæ; characters, parasites, and means against *C. sylvatica* [=*disstria*].

329. W[ALSH], B. D. The little Turk and its crescent. <Pract. Ent., August–September, 1867, v. 2, pp. 114–115.

Comments on letter from F. C. Hill; oviposition of *Conotrachelus nenuphar*.

330. [WALSH, B. D.] Apple-worm. (*Carpocapsa pomonella.*) <Pract. Ent., August–September, 1867, v. 2, p. 115.

Prevalence of *C. pomonella* in 1867; food-habits of its larva.

331. W[ALSH], B. D. Spindle-worms. <Pract. Ent., August–September, 1867, v. 2, pp. 115–116.

Habits, etc., of *Achatodes zeæ* and of *Gortyna nitela.*

332. W[ALSH], B. D. A plant growing out of an insect. <Pract. Ent., August–September, 1867, v. 2, p. 116.

Larvæ of *Lachnosterna fusca* infested with *Cordyceps* turned up by the plow in large numbers; larvæ supposed to have eaten poisonous seed which has germinated after killing the larvæ; sowing the seed as a means against the larvæ.

333. [WALSH, B. D.] The imported gooseberry saw-fly. <Pract. Ent., August–September, 1867, v. 2, p. 116.

Changes in the larva of *Nematus ventricosus* [= *ribesii*] during the last moult; ravages in Columbia County, N. Y.; extent of spread from Rochester, N. Y.

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Spread of *Doryphora 10-lineata* into southern Michigan and western Indiana.

335. W[ALSH], B. D. Apple-tree plant-lice. (*Aphis mali.*) <Pract. Ent., August–September, 1867, v. 2, pp. 116–117.

Effects of early frosts on *Aphis mali.*

336. W[ALSH], B. D. The tent-caterpillar of the apple-tree. (*Clisiocampa americana.*) <Pract. Ent., August–September, 1867, v. 2, p. 117.

Scarcity of *C. americana* in 1867 due to the abundance of an egg parasite.

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Ravages and description of *Sphenophorus zeæ* n. sp. [=*sculptilis*]; habits of the larva and imago.

338. [WALSH, B. D.] [*Rhyssa atrata.*] <Pract. Ent., August–September, 1867, v. 2, p. 118.

Answer to inquiry of H. K. Smith; *Rhyssa* [= *Thalessa*] *atrata* ovipositing in hickory.

339. [WALSH, B. D.] [Grape-vine beetles.] <Pract. Ent., August–September, 1867, v. 2, p. 118.

Answer to inquiry of L. D. Morse; ravages and food-plants of *Fidia viticida* and of *F. longipes.*

340. [WALSH, B. D.] [Currant insects.] <Pract. Ent., August–September, 1867, v. 2, p. 118.

Answer to inquiry of A. M. Burns; identification of *Ægeria tipuliformis;* mention of species called currant-worms; destructiveness of *Nematus ventricosus* [=*ribesii*].

341. [WALSH, B. D.] [Rascal leaf-crumpler.] <Pract. Ent., August–September, 1867, v. 2, p. 118.

Answer to inquiry of J. M. K.; times of transformation and means against *Phycita nebulo* [=*Acrobasis indiginella*].

342. [WALSH, B. D.] [Strawberry enemy.] <Pract. Ent., August–September, 1867, v. 2, p. 118.

Answer to inquiry of C. Faxon; characters, habits, and means against *Polydesmus serratus;* roots of strawberry plants injured by the same.

343. [WALSH, B. D.] [Eight-spotted forester.] <Pract. Ent., August–September, 1867, v. 2, p. 118.

Answer to inquiry of A. Gilbert; characters and food-plants of *Alypia octomaculata.*

344. [WALSH, B. D.] [Maple bark-louse.] <Pract. Ent., August–September, 1867, v. 2, p. 119.

Answer to inquiry of B. W. McLain; characters of undescribed coccid on maple.

345. [WALSH, B. D.] [Apple-tree bark-lice.] <Pract. Ent., August–September, 1867, v. 2, p. 119.

Answer to inquiry of A. Gilbert; identification of *Aspidiotus harrisii* [=*Chionaspis furfurus*] and of *A. conchiformis* [=*Mytilaspis pomorum*] on apple-trees.

346. [WALSH, B. D.] [Habits of larvæ and pupæ.] <Pract. Ent., August–September, 1867, v. 2, p. 119.

Answer to inquiry of M. M. S.; insects which transform under ground enter the earth in the larval stage; apparatus used by pupæ in forcing their way to the surface of the ground.

347. [WALSH, B. D.] [Potato-beetles: *Cicindela sex-guttata.*] <Pract. Ent., August–September, 1867, v. 2, p. 119.

Answer to inquiry of P. B. Sibley; mention of *Lytta cinerea* [=*Macrobasis unicolor*], and of *Doryphora 10-lineata* as destructive to potato vines; supposed larval habits of *Cicindela sex-guttata.*

348. [WALSH, B. D.] [Wavy-striped flea-beetle.] <Pract. Ent., August–September, 1867, v. 2, p. 119.

Answer to inquiry of E. T. Snelling; food-habits of *Haltica striolata* [=*Phyllotreta vittata*].

349. [WALSH, B. D.] [Parasites of cut-worms.] <Pract. Ent., August–September, 1867, v. 2, p. 119.

Answer to inquiry of J. Edgerton; metamorphoses of tachinid parasites of *Noctuidæ*.

350. [WALSH, B. D.] [Eggs on sugar-maple.] <Pract. Ent., August–September, 1867, v. 2, p. 119.

Answer to inquiry of W. Prichard; egg-rings of *Clisiocampa americana?* on sugar-maple.

351. [WALSH, B. D.] [Click-beetles.] <Pract. Ent., August–September, 1867, v. 2, p. 119.

Answer to inquiry of J. H. Foster, jr.; food-habits of *Melanotus communis* and of *Monocrepidius vespertinus*.

352. [WALSH, B. D.] [*Chrysobothris femorata*.] <Pract. Ent., August–September, 1867, v. 2, p. 119.

Answer to inquiry of J. J. Kelly; food-habits of *Chrysobothris femorata*.

353. [WALSH, B. D.] [Gall on chestnut.] <Pract. Ent., August–September, 1867, v. 2, p. 119.

Answer to inquiry of W. Kite; mention of an undetermined *Phylloxera* gall on the flower-catkin of the chestnut.

354. [WALSH, B. D.] [Grape-vine beetle: Bugs.] <Pract. Ent., August–September, 1867, v. 2, p. 119.

Answer to inquiry of B. F. Lazear; habits of *Pelidnota punctata*; swarming of *Corimelæna pulicaria*; defensive odors of Heteroptera.

355. [WALSH, B. D.] [Squash-vine insects.] <Pract. Ent., August–September, 1867, v. 2, p. 120.

Answer to inquiry of J. H. Parsons; larval habits of *Diabrotica vittata*; confusion caused by popular names.

356. [WALSH, B. D.] [Mites.] <Pract. Ent., August–September, 1867, v. 2, p. 120.

Answer to inquiry of C. Carpenter; characters and life-habits of Acarina.

357. [WALSH, B. D.] [*Haltica cucumeris*.] <Pract. Ent., August–September, 1867, v. 2, p. 120.

Answer to inquiry of G. S.; food-habits of *Haltica* [= *Crepidodera*] *cucumeris*.

358. [WALSH, B. D.] [Insects named.] <Pract. Ent., August–September, 1867, v. 2, p. 120.

Answer to inquiry of M. H. Boye; food-habits of *Conotrachelus cratægi*, *Melanotus communis*, *Pelidnota punctata*, *Desmocerus palliatus*, *Lucidota atra*, *Podabrus rugulosus*, and *P. modestus*; variation of *Haltica* [= *Crepidodera*] *helxines*; characters of *Dolerus arvensis*.

359. [WALSH, B. D.] [Insects named.] <Pract. Ent., August–September, 1867, v. 2, p. 120.

Answer to inquiry of H. Burt; identification of several insects; climbing habits of cut-worms.

360. [WALSH, B. D.] [Hickory-galls.] <Pract. Ent., August–September, 1867, v. 2, p. 120.

Answer to inquiry of W. C. Fish; characters of galls made by *Phylloxera caryæglobuli* and *P. caryæcaulis*; identification of several beetles.

361. [WALSH, B. D.] [Yellow swallow-tail; Rose-beetle.] <Pract. Ent., August–September, 1867, v. 2, p. 120.

Answer to inquiry of J. Barratt; identification of *Papilio turnus;* transformation and ravages of *Macrodactylus subspinosus.*

362. [WALSH, B. D.] [Blister-beetles.] <Pract. Ent., August–September, 1867, v. 2, p. 120.

Answer to inquiry of D. W. Kauffman; food-plants and characters of *Macrobasis murina* [=*unicolor*] and of *Epicauta atrata* [=*pennsylvanica*].

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Answer to inquiry of S. R. Williams; occurrence of *Clisiocampa americana* on pear-trees and of *C. sylvatica* [=*distria*] on black-walnut.

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Answer to inquiry of A. H. Mills; characters of the larva of *Nematus ventricosus* [=*ribesii*], of *Ellopia* [=*Eufitchia*] *ribearia,* and of *Pristiphora grossulariæ.*

365. [WALSH, B. D.] [Potato-beetle enemies.] <Pract. Ent., August–September, 1867, v. 2, p. 121.

Answer to inquiry of W. Maus; description and habits of *Lebia grandis;* hemipterous enemies of *Doryphora 10-lineata.*

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Extract from Mo. Rept. U. S. Agric. Bureau, 1866, p. 344; doubts the occurrence of *Doryphora 10-lineata* in Pennsylvania.

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Address, with discussion by others, at the third annual meeting of the Southern Illinois Fruit Growers and Shippers' Association; ravages and means against *Pemphigus pyri* [=*Schizoneura lanigera*], *Carpocapsa pomonella, Trypeta pomonella, Semasia* [=*Grapholitha*] *pruinivora, Cœliodes* [=*Craponius*] *inæqualis, Conotrachelus nenuphar.*

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Range of swarms of *Caloptenus spretus* in Iowa in 1867.

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Periodicity and local distribution of the various broods of *Cicada* [= *Tibicen*] *septendecim*.

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Sting of *Cicada* not poisonous; sting of *Stizus grandis* [= *Sphecius speciosus*] mistaken for it; habits of the *Stizus*.

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Habits and figures of *Macronema zebratum*, *Palingenia* [= *Hexagenia*] *bilineata*, *Cicada* sp., *Stizus grandis* [= *Sphecius speciosus*], *Xylocopa carolina* [= *virginica*], and *Anthophora sponsa* [= *abrupta*]; sting of *Cicada* not poisonous, that of the *Stizus* mistaken for it; habits of *Conotrachelus nenuphar*; description of Hull's Curculio-catcher; *Conotrachelus anaglypticus* and *Colaspis* sp. injurious to plum-trees; figures of *Rhopalus* sp. and *Euryomia* [= *Euphoria*] *melancholica* injurious to pear-trees; figure and habits of *Metapodius nasalus* [= *femoratus*]; predaceous habits of *Arma* [= *Podisus*] *spinosus*, *Evagoras viridis* [= *Diplodus luridus*], and *Stiretrus fimbriatus* [= *anchorago*]; work of *Aspidiotus harrisii* [= *Chionaspis furfurus*] upon pear, and of *Cecidomyia* [= *Diplosis*] *tritici* in wheat; occurrence of *Endrosa* [= *Lachnosterna*] *quercus*, *Doryphora juncta*, and *Trichius delta* in Illinois; mite enemy of *Aspidiotus conchiformis* [= *Mytilaspis pomorum*]; injury to fruit by *Apis mellifica*; hot water as a means against *Schizoneura lanigera*; habits and figures of *Chrysopa* sp.; figures of *Aspidoglossa subangulata*, *Harpalus pennsylvanicus*, and *Evarthrus orbatus*; figures and descriptions of larva of a carabid and of *Chauliognathus pennsylvanicus*; Curculio-feeding habits of *Carabidæ*.

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TABLE OF CONTENTS.

Introductory 3

Chapter 1. The grape Curculio. *Cœliodes* [= *Craponius*] *inæqualis* Say.
Its history—Guest insects, parasites, and cannibals—Remedy 13

Chapter 2. The grape-leaf gall-louse. *Dactylosphæra vitifoliæ*, Fitch [= *Phylloxera vastatrix*].
Peculiar to the Clinton and other cultivated varieties of Frost grape—Practical inference therefrom 21

Chapter 3. The rose-bug. *Macrodactylus subspinosus* Linn.
Device for destroying it on grape-vines 24

Chapter 4. The grape-root borer. *Ægeria* [= *Sciapteron*] *polistiformis* Harris.
Its history—Its scientific nomenclature—Remedies 24

Chapter 5. The apple-worm or codling-moth. *Carpocapsa pomonella* Linn.
Double-brooded—Practical inference therefrom—Remedies 27

Chapter 6. The apple-maggot fly. *Trypeta pomonella* Walsh.
Occurs at present only in certain Eastern States on the apple, though it was found long ago in Illinois on the crab—Its history. 29

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373. **Walsh, B. D.**—Continued.

Chapter 7. The rascal leaf-crumpler. *Phycita nebulo* Walsh [= *Acrobasis indiginella*].

A peculiarly Northwestern species, not found either East or South—Easily destroyed 34

Chapter 8. The oyster-shell bark-louse. *Aspidiotus conchiformis* Gmel. [= *Mytilaspis pomorum*].

Its history—Loses almost all its organs when only a few days old, and becomes thenceforth as stationary as a cabbage—How it spreads from tree to tree—Mites and their natural history—Plant-feeding mites, parasitic mites, and cannibal mites—The bark-louse largely preyed on by a minute cannibal mite—Useless and useful remedies 34

Chapter 9. Harris' bark-louse. *Aspidiotus harrisii* Walsh [= *Chionaspis furfurus*].

How it differs from the preceding—The geographical distribution. 53

Chapter 10. The apple-root plant-louse. *Pemphigus pyri* Fitch [= *Schizoneura lanigera*].

Often confounded in Illinois with the true "Woolly plant-louse"—The differences—Its history—Causes a form of "rotten-root"—Its supposed cannibal foes—Remedies 55

Chapter 11. The plum Curculio. *Conotrachelus nenuphar* Herbst.

Its history—Its peculiar crescent cut explained—Double-brooded—Its supposed enemies, the so-called "Curculio parasite" and the Baltimore oriole—Remedies 64

Chapter 12. The plum-gouger. *Anthonomus prunicida* Walsh [= *Coccotorus scutellaris*].

Bores a round hole in the plum, instead of a crescent cut—How and why it does this—Differs in many other respects from the Curculio 72

Chapter 13. The plum-moth. *Semasia* [= *Grapholitha*] *prunivora* Walsh.

Its history—Probably a guest-moth, and therefore not injurious.. 78

Chapter 14. The hateful grasshopper. *Caloptenus spretus* Walsh.

The Rocky Mountains its natural home—Invades in certain years certain neighboring districts, such as Texas, Missouri, Kansas, Nebraska, and Iowa—Lays there millions of eggs, which develop into barren grasshoppers only—Invasion of 1866—Damage done by the young grasshoppers in the spring of 1867—In Kansas about one-eighth of the field crops and seven-eighths of the garden crops destroyed by them—Grashopper invasions of A. D. 1820, 1856, 1857, 1864, and 1867—Probable results in 1868 of the invasion of 1867—Has never yet come within 115 miles of Illinois—Can not spread into Illinois as the Colorado potato-bug has done—Reasons why, in all human probability, it can never reach Illinois at all 82

374. **Walsh, B. D.** A friend unmasked. <Amer. Ent., November, 1868, v. 1, pp. 51–52, fig. 55.

Description and figures of larva and adult of *Chauliognathus pennsylvanicus*; characters and habits of the *Telephoridæ*.

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Habits of *Chrysididæ*; descriptions of *Stizus* [*Megastizus*] *brevipennis* n. sp., *Agenia subcorticalis* n. sp., *A. architectus* Say, *A. cupida* Cress., *A. bombycina* Cress., *Ceropales rufiventris* n. sp., and *Ammophila pictipennis* n. sp.; tabular separation of the genera of *Sphecidæ*. See No. 543.

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Description of cecidomyidous leaf-gall on *Cratægus*; mentions of three additional Cecidomyidous, and an Acaridous gall on the same; *Anthonomus cratægi* inquilinous in gall on *Cratægus*.

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Treats of *Carpocapsa pomonella*, *Aspidiotus conchiformis* [=*Mytilaspis pomorum*], *Anisopteryx* [= *Paleacrita*] *vernata*, *Saperda bivittata* [= *candida*], *Chrysobothris femorata*, *Conotrachelus nenuphar*, and *Anthonomus prunicida* [= *Coccotorus scutellaris*].

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Characters of larva and imago of *Ægeria cucurbitæ* [= *Melittia ceto*]; natural history, means against, and distribution of the same.

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Comparative differences between *Saperda* and *Chrysobothris*; soap as a means against the same.

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Division of *Hemiteles* into two groups; description of *H. nematívorus* n. sp.; larval and pupal history of the same by C. J. S. Bethune.

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Correction of errors in No. 380; sexual characters of *Hemiteles*; variation in the time at which the imago state is assumed by hibernating insects; heteropterous enemies of *Nematus ventricosus* [= *ribesii*].

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Characters and habits of larval *Homalomyia*; description of the larva of *H. wilsoni*, *H. leidyi*, and *H. prunivora* n. spp.; mention of recorded cases of diptera in the human bowels; figures larva of *H. wilsoni*.

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Sketch of an average day's work of a State entomologist.

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Descriptions, habits, and figures of many *Eurytomides*; synoptic tables of the species of *Eurytoma* and *Decatoma*. For a list of the new species see the *Systematic Index*.

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Printed posthumously, with notes by E. T. Cresson; description of many previously described *Tenthredinidæ* and *Ichneumonidæ*; five (5) new genera and forty-five (45) new species of *Ichneumonidæ* are described, for a list of which see the *Systematic Index*; figures venation of front wing of *Ichneumon*.

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TO

AMERICAN ECONOMIC ENTOMOLOGY.

PREPARED, BY AUTHORITY OF THE SECRETARY OF AGRICULTURE,

BY

SAMUEL HENSHAW.

PART II.

THE MORE IMPORTANT JOINT WRITINGS

OF

B. D. WALSH and C. V. RILEY.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1889.

BIBLIOGRAPHY OF THE MORE IMPORTANT CONTRIBUTIONS TO AMERICAN ECONOMIC ENTOMOLOGY.

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Importance and extent of the ravages of insects; practicability of the diminution of these ravages; value of entomological work; aims of the *American Entomologist.*

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Effectiveness of swine as a means against *Conotrachelus nenuphar* and *Carpocapsa pomonella;* quotations showing good results from pasturing swine in fruit orchards.

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Definition of the different stages of insect transformation.

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Seasons, food-plants, characters, and figures of *Lecanium macluræ* n. sp., [=*Pulvinaria innumerabilis*] and of *L. acericola* n. sp. [=*P. innumerabilis*]; characters and economic importance of the genus *Aspidiotus.*

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Reprint and criticism of article, "How to destroy the cotton-worm—a suggestion."

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Ravages of *Acrididæ* in Illinois, Iowa, and Missouri; mention of the species committing these ravages; means against the same.

392. [WALSH, B. D., and C. V. RILEY.] The old and the new philosophy. <Amer. Ent., September, 1868, v. 1, p. 17.

Defense of the practical application of science.

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Definition of the "four grand branches of the animal kingdom;" mention of their respective classes.

394. [WALSH, B. D., and C. V. RILEY.] *Ad interim* committees. <Amer. Ent., September, 1868, v. 1, p. 18.

Duties of *ad interim* committees of horticultural societies; the *American Entomologist* ready to publish any scientific discoveries or observations with regard to rots or diseases of a vegetal nature.

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Notice of W. H. Edwards's "The butterflies of North America," pt. 1; of A. S. Packard, jr.'s "Guide to the study of insects," pt. 2; and of the "Canadian Entomologist," v. 1, No. 1.

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Answer to inquiry of W. McC.; characters and transformations of *Photinus pyralis*; figures larva, with details of structure, pupa, and imago.

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Answer to inquiry of W. D. F. Lummis; characters and ravages of an undetermined longicorn larva; food-habits of *Orthosoma cylindricum* [= *brunneum*].

398. [WALSH, B. D., and C. V. RILEY.] Bugs on grape-vines mistaken for chinch-bugs. <Amer. Ent., September, 1868, v. 1, p. 19.

Answer to inquiry of F. Hecker; characters, ravages, and food-plants of *Blissus leucopterus* and of *Piesma cinerea*.

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Answer to inquiry of F. Hecker; characters and ravages of *Proconia* [= *Oncometopia*] *undata*.

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Answer to inquiry of C. H. Peck; food-habits of *Tingis* [= *Gargaphia*] *tiliæ* and of *T.* [= *Corythuca*] *ciliata*; punctures on leaves caused by Hemiptera.

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Failure of popular authors to distinguish between the different insects infesting the potato plant; brief accounts and figures of one or more stages of the following species: *Gortyna nitela*, *Baridius* [= *Trichobaris*] *trinotata*, *Sphinx* 5-*maculata* [= *Protoparce celeus*], *Lytta* [= *Epicauta*] *vittata*, *L. atrata* [= *E. pennsylvanica*], *L. marginata* [= *E. cinerea*], *L. cinerea* [= *Macrobasis unicolor*], *L. murina* [= *M. unicolor*], *Lema trilineata*, and *Haltica* [= *Crepidodera*] *cucumeris*; migrations, habits, enemies, and means against *Doryphora* 10-*lineata*; figures of all stages of *D.* 10-*lineata* and *D. juncta* and of numerous enemies of the former.

402. [WALSH, B. D., and C. V. RILEY.] "Grasshoppers." Their devastations in western Iowa and the good that has resulted from them. <Amer. Ent., October, 1868, v. 1, pp. 27–28.

Letter of M. C. Nickerson, with comments; seeds of *Vilfa vaginæflora* carried by "grasshoppers."

403. [WALSH, B. D., and C. V. RILEY.] An apple growing on a grapevine. <Amer. Ent., October, 1868, v. 1, p. 28.

Extract from *Richmond (Va.) Whig*, with criticism; a gall of *Cecidomyia vitis-pomum* mistaken for an apple growing on a grape-vine. See Nos. 332, 436, 478.

404. [WALSH, B. D., and C. V. RILEY.] Ticks and Texas fever. <Amer. Ent., October, 1868, v. 1, p. 28.

Improbability that *Ixodes bovis* is the cause of the Texas fever of cattle.

405. [WALSH, B. D., and C. V. RILEY.] Scientific symbols. <Amer. Ent., October, 1868, v. 1, p. 28. Reprint: <Op. cit., November, 1869, v. 2, p. 50.

Explanation of the use of the signs designating the sexes.

406. [WALSH, B. D., and C. V. RILEY.] A swarm of butterflies. <Amer. Ent., October, 1868, v. 1, pp. 28–29, figs. 20–22.

Record of swarms of *Danais archippus*; food-plant of larva; figures larva, chrysalis, and imago.

407. [WALSH, B. D., and C. V. RILEY.] The sting of the 17-year Cicada. <Amer. Ent., October, 1868, v. 1, pp. 36–37.

Communications from F. W. Collins, R. Richardson, and B. Borden, on the reputed sting of *Cicada* [= *Tibicen*] *septendecim* and on the habits of *Stizus grandis* [= *Sphecius speciosus*].

408. [WALSH, B. D., and C. V. RILEY.] On our table. <Amer. Ent., October, 1868, v. 1, p. 37.

Notice of "The insect world," by L. Figuier.

409. [WALSH, B. D., and C. V. RILEY.] Squash-bug; its change of color. <Amer. Ent., October, 1868, v. 1, p. 37.

Answer to inquiry of J. Periam; changes of color of *Coreus* [= *Anasa*] *tristis* during its metamorphoses.

410. [WALSH, B. D., and C. V. RILEY.] White grub; immunity from it next year in Clinton County, Mo. <Amer. Ent., October, 1868, v. 1, p. 37.

Answer to inquiry of J. P. McCartney; life-habits of *Lachnosterna fusca.*

411. [WALSH, B. D., and C. V. RILEY.] Insect enemies of the Colorado potato beetle. <Amer. Ent., October, 1868, v. 1, p. 37.

Answer to inquiry of S. H. Kriedelbaugh; identification of three insect enemies of *Doryphora 10-lineata.*

412. [WALSH, B. D., and C. V. RILEY.] "Harvest-bugs" in America, misnamed "jiggers." <Amer. Ent., October, 1868, v. 1, p. 38.

Answer to inquiry of M. McKenzie; habits of parasitic *Acarina*; distribution of and injuries caused by *Sarcopsylla penetrans.*

413. [WALSH, B. D., and C. V. RILEY.] Insects named. <Amer. Ent., October, 1868, v. 1, p. 38.

Answer to inquiry of J. T. Smith; food-plants of *Aphis mali* and of *Notodonta* [= *Œdemasia*] *concinna*; *Campoplex* [= *Limneria*] *fugitiva* parasitic on larva of *Euchœtes egle.*

414. [WALSH, B. D., and C. V. RILEY.] Grapes cut off by the tree cricket. <Amer. Ent., October, 1868, v. 1, p. 38, fig. 30–31.

Answer to inquiry of J. H. Tice; food-habits of *Œcanthus niveus*; deposition of eggs; figures both sexes.

415. [Walsh, B. D., and C. V. Riley.] The Buffalo tree-hopper. <Amer. Ent., October, 1868, v. 1, p. 38.

Answer to inquiry of P. Rickert; characters, habits, and means against *Ceresa bubalus.*

416. [Walsh, B. D., and C. V. Riley.] A scavenger mistaken for a foe. <Amer. Ent., October, 1868, v. 1, p. 38.

Answer to inquiry of Simmons and Tillson; characters and habits of the larva of *Copris carolina.*

417. [Walsh, B. D., and C. V. Riley.] Insect foes of the bark-louse. <Amer. Ent., October, 1868, v. 1, p. 39, fig. 32.

Answer to inquiry of J. Weed; habits and figures of larva and imago of *Chilocorus bivulnerus*; food-habits and figure of *Epilachna borealis.*

418. [Walsh, B. D., and C. V. Riley.] Best works on entomology. <Amer. Ent., October, 1868, v. 1, p. 39.

Answer to inquiry of B. M. Reynolds; mention of several important works on entomology.

419. [Walsh, B. D., and C. V. Riley.] Larvæ in plum-gum. <Amer. Ent., October, 1868, v. 1, p. 39.

Answer to inquiry of P. Rickert; unknown larva (probably dipterous) found in gum of plum tree; *Mycetophila* sp., bred from gum of peach-tree.

420. [Walsh, B. D., and C. V. Riley.] Insect foes of the hop vine. <Amer. Ent., October, 1868, v. 1, p. 39.

Answer to inquiry of H. C. Freeman; characters and habits of larva of *Saturnia* [=*Hyperchiria*] *io* and of *Vanessa* [=*Grapta*] *interrogationis.*

421. [Walsh, B. D., and C. V. Riley.] Insect foe of the apple-tree borer. <Amer. Ent., October, 1868, v. 1, p. 39.

Answer to inquiry of J. E. Walker; undetermined carabid larva preying upon larva of *Saperda candida.*

422. [Walsh, B. D., and C. V. Riley.] Oak tree caterpillars. <Amer. Ent., October, 1868, v. 1, p. 39.

Answer to inquiry of W. W. Daniells; characters and habits of larva of *Edema albifrons.*

423. [Walsh, B. D., and C. V. Riley.] Bark-lice on apple trees. <Amer. Ent., October, 1868, v. 1, p. 40.

Answer to inquiry of J. G. Fleck; *Mytilaspis pomorum* destroyed by a minute mite.

424. [Walsh, B. D., and C. V. Riley.] The "saddle-back" caterpillar. <Amer. Ent., October, 1868, v. 1, p. 40.

Answer to inquiries of E. Baxter and O. A. Kenyon; characters, habits, and urticating properties of the larva of *Empretia stimulea.*

425. [Walsh, B. D., and C. V. Riley.] The regal walnut caterpillar. <Amer. Ent., October, 1868, v. 1, p. 40.

Answer to inquiry of M. Copley; characters and food-plants of larva of *Citheronia regalis*; times of metamorphosis; characters of the imago.

426. [Walsh, B. D., and C. V. Riley.] The Hessian fly. <Amer. Ent., October, 1868, v. 1, p. 40.

Answer to inquiry of F. D. Carson; ravages of *Cecidomyia destructor*; late sowing as a means of avoiding the same.

427. [WALSH, B. D., and C. V. RILEY.] Red cedar caterpillar. <Amer. Ent., October, 1868, v. 1, p. 40.

Answer to inquiry of R. Peter; habits, characters, and means against *Thyridopteryx ephemeræformis.*

428. [WALSH, B. D., and C. V. RILEY.] Wheat-midge winter killed. <Amer. Ent., October, 1868, v. 1, p. 40.

Answer to inquiry of J. P. Alexander; cause of the scarcity of *Diplosis tritici.*

429. [WALSH, B. D., and C. V. RILEY.] Grape-vine borer. <Amer. Ent., October, 1868, v. 1, p. 40.

Answer to inquiries of A. Barter and J. H. Hogan; undetermined cerambycid larva injurious to grape-vines.

430. [WALSH, B. D., and C. V. RILEY.] Popular names and scientific names. <Amer. Ent., November, 1868, v. 1, p. 49, figs. 49–51.

Indefiniteness of popular names; figures *Julus* sp., and the larva and imago of one of the *Elateridæ.*

431. [WALSH, B. D., and C. V. RILEY.] Entomological ignorance in the North. <Amer. Ent., November, 1868, v. 1, pp. 50–51, figs. 52–54.

Confusion existing in regard to the meaning of the word locust; habits of *Acrididæ* and *Cicadidæ*; figures types of the two families and of twig with eggs of *Cicada* sp.

432. [WALSH, B. D., and C. V. RILEY.] Tit for tat. <Amer. Ent., November, 1868, v. 1, p. 52.

Ridicule of an absurd entomological item.

433. [WALSH, B. D., and C. V. RILEY.] Grasshoppers. <Amer. Ent., November, 1868, v. 1, p. 53.

Abundance and ravages of several species of *Acrididæ* and of *Acheta* [= *Gryllus*] *abbreviatus* in the northern central United States, and scarcity of the same in New York in 1868.

434. [WALSH, B. D., and C. V. RILEY.] To keep seed peas from bugs. <Amer. Ent., November, 1868, v. 1, p. 53.

Habits of and means against *Bruchus pisi.*

435. [WALSH, B. D., and C. V. RILEY.] Mind how you pack insects. <Amer. Ent., November, 1868, v. 1, p. 54.

Care needed to avoid the introduction of noxious insects.

436. [WALSH, B. D., and C. V. RILEY.] The apple growing on a grape vine. <Amer. Ent., November, 1868, v. 1, p. 54.

The "vegetable phenomenon," see Nos. 332, 403, 478, proved to be a gall.

437. [WALSH, B. D., and C. V. RILEY.] The late exhibition of useful and destructive insects at Paris. <Amer. Ent., November, 1868, v. 1, p. 55.

Notice of the formation of the Société d'Insectologie Agricole at Paris, and of the second exhibition of the society.

438. [WALSH, B. D., and C. V. RILEY.] Destroying black ants in gardens. <Amer. Ent., November, 1868, v. 1, p. 55.

Answer to inquiry of W. S. Patten; means against *Formicidæ* in gardens.

439. [Walsh, B. D., and C. V. Riley.] Entomological quackery. <Amer. Ent., November, 1868, v. 1, p. 56.

Reprint of "The Curculio (Iowa Homestead, 22d July, 1868), with comments; means against *Conotrachelus nenuphar.*

440. [Walsh, B. D., and C. V. Riley.] The cruel bug-hunters. <Amer. Ent., November, 1868, v. 1, p. 56.

Insects are not susceptible of such feelings of pain and pleasure as are felt by higher animals.

441. [Walsh, B. D., and C. V. Riley.] Honey bees eating grapes. <Amer. Ent., November, 1868, v. 1, p. 56.

Reprint of a letter by T. W., from Ohio Farmer, with comments; *Apis mellifica* as an enemy of sound fruit.

442. [Walsh, B. D., and C. V. Riley.] Twigs amputated by some unknown animal. <Amer. Ent., November, 1868, v. 1, p. 57.

Answer to inquiry of G. Burnside; method of work of an undetermined fruit-tree pruner [= *Oncideres cingulata* ?].

443. [Walsh, B. D., and C. V. Riley.] Twigs girdled by some animal. <Amer. Ent., November, 1868, v. 1, p. 57.

Answer to inquiries of Judge Brown and P. Earle; method of work of an undetermined fruit-tree pruner [= *Oncideres cingulata* ?]; trees affected.

444. [Walsh, B. D., and C. V. Riley.] Hop-vine caterpillar. <Amer. Ent., November, 1868, v. 1, p. 57.

Answer to inquiry of H. J. Dunlap; larva of *Grapta interrogationis* feeding on hop-vines.

445. [Walsh, B. D., and C. V. Riley.] "Galls" on leaves of soft maple. <Amer. Ent., November, 1868, v. 1, p. 57.

Answer to inquiry of A. L. Child; characters of undescribed mite-galls and their architects; mode of formation of leaf-galls by mites.

446. [Walsh, B. D., and C. V. Riley.] Unsightly galls on the cottonwood. <Amer. Ent., November, 1868, v. 1, p. 57.

Answer to inquiry of A. L. Child; character of galls made by *Pemphigus vagabondus* and *P. populicaulis*; their effects upon the cottonwood and means against them.

447. [Walsh, B. D., and C. V. Riley.] Insects named. <Amer. Ent., November, 1868, v. 1, p. 57.

Answer to inquiry of E. Baxter; *Gordius aquaticus* a host in *Orchelimum gracile*; *Cetonia* [= *Euphoria*] *inda* destructive to the peach.

448. [Walsh, B. D., and C. V. Riley.] The stick-bug. <Amer. Ent., November, 1868, v. 1, p. 58. Reprint: <Can. Farmer, 15 January, 1870.

Description, vernacular names, and habits of *Spectrum* [= *Diapheromera*] *femorata.*

449. [Walsh, B. D., and C. V. Riley.] Woolly lice on the beech. <Amer. Ent., November, 1868, v. 1, p. 58.

Answer to inquiry of F. H. Guiwits; habits and food-plants of *Pemphigus imbricator.*

450. [WALSH, B. D., and C. V. RILEY.] The sheep-bot or head-maggot. <Amer. Ent., November, 1868, v. 1, p. 58.

Answer to inquiry of R. W. Scott; *Œstrus ovis* ordinarily oviparous; sometimes the eggs hatch prematurely inside the body.

451. [WALSH, B. D., and C. V. RILEY.] Leaf-miners of the locust. <Amer. Ent., November, 1868, v. 1, p. 58.

Answer to inquiry of R. W. Scott; characters, habits, ravages, and means against *Hispa scutellaris* [= *Odontota dorsalis*].

452. [WALSH, B. D., and C. V. RILEY.] Leaf-hoppers on celery. <Amer. Ent., November, 1868, v. 1, p. 58.

Answer to inquiry of R. Parnell; mention of two undescribed *Tettigonidæ* infesting early celery.

453. [WALSH, B. D., and C. V. RILEY.] Parsnip caterpillars.—Scorpions. <Amer. Ent., November, 1868, v. 1, p. 59.

Answer to inquiry of F. Brewer; food-plants of larva of *Papilio asterias*; habits of the imago; habits and sting of *Buthus carolinianus*; its occurrence in Missouri.

454. [WALSH, B. D., and C. V. RILEY.] Noxious insects named. <Amer. Ent., November, 1868, v. 1, p. 59.

Answer to inquiry of J. H. Parsons; larval characters and food-plants of *Hyphantria textor* [= *cunea*], *Notodonta* [= *Œdemasia*] *concinna*, *Arctia* [= *Spilosoma*] *virginica*, *Carpocapsa pomonella*, and of *Trypeta pomonella*.

455. [WALSH, B. D., and C. V. RILEY.] Cut-worms destroying recently sown wheat. <Amer. Ent., November, 1868, v. 1, p. 59.

Answer to inquiry of T. R. Allen; characters, habits, and means against undetermined *Noctuidæ* attacking wheat.

456. [WALSH, B. D., and C. V. RILEY.] The spined soldier bug. <Amer. Ent., November, 1868, v. 1, p. 59.

Answer to inquiry of I. Hicks; *Podisus spinosus* as an enemy of *Hyphantria textor* [= *cunea*].

457. [WALSH, B. D., and C. V. RILEY.] The preying Mantis, alias Devil's riding horse, etc. <Amer. Ent., November, 1868, v. 1, p. 59.

Answer to inquiry of A. Pettit; habits of *Mantis* [=*Phasmomantis*] *carolina*; egg-mass of the same.

458. [WALSH, B. D., and C. V. RILEY.] The pigeon Tremex. <Amer. Ent., November, 1868, v. 1, p. 59.

Answer to inquiry of F. Brewer; characters of *Tremex columba*; food-habits and parasites of its larva.

459. [WALSH, B. D., and C. V. RILEY.] Flesh-worms. <Amer. Ent., November, 1868, v. 1, p. 59.

Answer to inquiry of W. J. Stuart; larval habits of an undetermined muscid.

460. [WALSH, B. D., and C. V. RILEY.] Fall web-worm on hickory. <Amer. Ent., November, 1868, v. 1, p. 59.

Answer to inquiry of W. W. Daniels; transformation of *Hyphantria textor* [= *cunea*]; characters of its larva and imago.

461. [Walsh, B. D., and C. V. Riley.] Butterflies named. <Amer. Ent., November, 1868, v. 1, p. 60.

Answer to inquiry of W. W. Butterfield; characters of *Colias philodice*, *Vanessa* [=*Grapta*] *comma*, and *Danais archippus*.

462. [Walsh, B. D., and C. V. Riley.] Museum pest. <Amer. Ent., November, 1868, v. 1, p. 60.

Answer to inquiry of T. W. Holt, jr.; means against *Dermestidæ*.

463. [Walsh, B. D., and C. V. Riley.] Insects named. <Amer. Ent., November, 1868, v. 1, p. 60.

Answer to inquiry of J. Weed; enemies of plant-lice and bark-lice; food-plant and characters of the larva of *Papilio turnus*.

464. [Walsh, B. D., and C. V. Riley.] Grapes spoiled by something. <Amer. Ent., November, 1868, v. 1, p. 60.

Answer to inquiry of J. Wood; grapes injured from some unknown cause; juice from wounded grapes as food for moths.

465. [Walsh, B. D., and C. V. Riley.] White-pine worms. <Amer. Ent., November, 1868, v. 1, p. 60.

Answer to inquiry of J. T. Little; food-plants of larva of *Lophyrus abbotii*; transformations of the same.

466. [Walsh, B. D., and C. V. Riley.] The Tarantula of Texas. <Amer. Ent., November, 1868, v. 1, p. 60.

Answer to inquiry of J. Bell; manner in which *Pompilus* [=*Pepsis*] *formosa* prepares *Mygale hentzii* for food for its larva.

467. [Walsh, B. D., and C. V. Riley.] Insect foes of the apple-tree. <Amer. Ent., November, 1868, v. 1, p. 60.

Answer to inquiry of G. C. Brackett; characters of larva of *Carpocapsa pomonella*; means against *Datana ministra* and *Pemphigus pyri* [=*Schizoneura lanigera*].

468. [Walsh, B. D., and C. V. Riley.] Grape-leaf folders eaten by spiders. <Amer. Ent., November, 1868, v. 1, p. 60.

Answer to inquiry of A. A. Hilliard; larva of *Desmia maculalis* destroyed by a spider.

469. [Walsh, B. D., and C. V. Riley.] Caterpillar of the Troilus butterfly. <Amer. Ent., November, 1868, v. 1, p. 60.

Answer to inquiry of A. S. Fuller; food-habits of larva of *Papilio troilus*.

470. [Walsh, B. D., and C. V. Riley.] Potato beetles. <Amer. Ent., November, 1868, v. 1, p. 60.

Answer to inquiry of P. H. Foster; identification of *Epicauta vittata* and *Macrobasis unicolor* as enemies of the potato.

471. [Walsh, B. D., and C. V. Riley.] Holes round the roots of young ash trees in the nursery. <Amer. Ent., November, 1868, v. 1, p. 60.

Answer to inquiry of I. Hicks; characters and food-habits of the larva of *Xyloryctes satyrus*.

472. [Walsh, B. D., and C. V. Riley.] Locust borers. <Amer. Ent., November, 1868, v. 1, p. 60.

Answer to inquiry of U. Bruner; destructiveness of the larva of *Clytus* [=*Cyllene*] *robiniæ*.

473. [WALSH, B. D., and C. V. RILEY.] The hellgrammite fly. <Amer. Ent., December, 1868, v. 1, pp. 61–62, figs. 56–57.

Habits of *Corydalus cornutus*; figures the larva, pupa, and imago; description and figure of the eggs of *Belostoma americanum* mistaken for those of *Corydalus*.

474. [WALSH, B. D., and C. V. RILEY.] The periodical Cicada. <Amer. Ent., December, 1868, v. 1, pp. 63–72, figs. 58–64. Extract: <Op. cit., June, 1869, v. 1, p. 202.

Characterization of the 13-year brood of *Cicada* as a new species, *C.* [= *Tibicen*] *tredecim*; dimorphism of the same and of *C.* [= *T.*] *septendecim*; seasons, natural history, transformations, enemies, sting, and injuries of these species; chronological history of their several known broods; figures the several stages of *C.* [= *T.*] *septendecim*, the towers made by the pupa and twigs with eggs.

475. [WALSH, B. D., and C. V. RILEY.] The hateful or Colorado grasshopper, *Caloptenus spretus*, Uhler and Walsh. <Amer. Ent., December, 1868, v. 1, pp. 73–76, fig. 65.

Comparative characters and figures of *Caloptenus spretus* and *C. femur-rubrum*; native habitat, migrations, distribution, and ravages of the former; harmlessness of its second generation in the Mississippi Valley as compared with the first generation; improbability that it will ever become a permanent resident in that region.

476. [WALSH, B. D., and C. V. RILEY.] The twig-girdler, *Oncideres cingulatus*, Say. <Amer. Ent., December, 1868, v. 1, pp. 76–77, fig. 66.

Oviposition and food habits of *Oncideres cingulata*; figure of imago and of amputated twig.

477. [WALSH, B. D., and C. V. RILEY.] An Ichneumon fly mistaken for a wasp. <Amer. Ent., December, 1868, v. 1, p. 77.

Review of paper in *Christian Advocate* on "The stiletto wasp"; *Pimpla* [= *Thalessa*] *atrata* probably mistaken for a wasp.

478. [WALSH, B. D., and C. V. RILEY.] A plant growing out of an insect. <Amer. Ent., December, 1868, v. 1, p. 77.

See Nos. 332, 403, 436; extract from *Sedalia Press*, with comments; larvæ of *Lachnosterna fusca* infested with *Cordyceps*; larvæ supposed to have eaten poisonous seed, which has germinated after killing the larvæ; sowing the seed as a means against the larvæ.

479. [WALSH, B. D., and C. V. RILEY.] On our table. <Amer. Ent., December, 1868, v. 1, p. 78.

Notices of The butterflies of North America by W. H. Edwards.—The Canadian Entomologist.—Guide to the study of insects by A. S. Packard, jr.

480. [WALSH, B. D., and C. V. RILEY.] Eggs of the white-marked tussock moth. <Amer. Ent., December, 1868, v. 1, p. 79, fig. 67.

Answer to inquiry of J. M. Hannah; characters of egg and larva of *Orgyia leucostigma*; sexual differences; parasites; figure of the larva.

481. [WALSH, B. D., and C. V. RILEY.] Currant borers. <Amer. Ent., December, 1868, v. 1, p. 79.

Answer to inquiry of B. N. McKinstry; means against *Trochilium* [= *Ægeria*] *tipuliformis*, *T.* [= *Alcathœ*] *caudatum*, and *Psenocerus supernotatus*.

482. [Walsh, B. D., and C. V. Riley.] Insect infesting grape seed. <Amer. Ent., December, 1868, v. 1, p. 79, fig. 68.

Answer to inquiry of A. S. Fuller; characters and figure of larva of *Isosoma vitis* infesting grape seed.

483. [Walsh, B. D., and C. V. Riley.] Museum pests again. <Amer. Ent., December, 1868, v. 1, p. 79.

Answer to inquiry of J. Huggins; means against *Anthreni* in collections of natural history.

484. [Walsh, B. D., and C. V. Riley.] Grape-vine leaf-hoppers. <Amer. Ent., December, 1868, v. 1, p. 79.

Answer to inquiry of P. C. Holmes; means against grape-vine leaf-hoppers.

485. [Walsh, B. D., and C. V. Riley.] Apple-tree borer. <Amer. Ent., December, 1868, v. 1, p. 80, fig. 69.

Answer to inquiries of J. T. Zimmerman, C. H. Roberts, and C. R. Babbitt; habits, ravages, and figure of *Bostrichus* [= *Amphicerus*] *bicaudatus.*

486. [Walsh, B. D., and C. V. Riley.] The murky ground beetle. <Amer. Ent., December, 1868, v. 1, p. 80.

Answer to inquiry of E. T. Dale; food-habits and bombardier discharges of *Harpalus caliginosus.*

487. [Walsh, B. D., and C. V. Riley.] Curculio and bark-lice. <Amer. Ent., December, 1868, v. 1, p. 80.

Answer to inquiry of D. A. Compton; hibernation of *Conotrachelus nenuphar*; soft soap as a means against *Coccidæ.*

488. [Walsh, B. D., and C. V. Riley.] Insects to be named. <Amer. Ent., December, 1868, v. 1, p. 80.

Answer to inquiry of E. B. Beach; identification of several lepidopterous larvæ; food-habits of *Dryocampa stigma* and *D. pellucida* [= *virginiensis*].

489. [Walsh, B. D., and C. V. Riley.] Young pecan trees girdled. <Amer. Ent., December, 1868, v. 1, p. 80.

Answer to inquiry of Mann and Redmond; means against *Oncideres cingulata.*

490. [Walsh, B. D., and C. V. Riley.] Insects named. <Amer. Ent., December, 1868, v. 1, p. 80.

Answer to inquiry of E. T. Dale; identification of several Coleoptera; supposed food-habits of *Tragidion fulvipenne*; character of cocoons of two species of *Microgaster* infesting *Protoparce celeus.*

491. [Walsh, B. D., and C. V. Riley.] Eggs of true bugs. <Amer. Ent., December, 1868, v. 1, p. 80.

Answer to inquiry of S. C. Thornton; characters of eggs of *Prionidus cristatus.* See Amer. Ent., v. 1, pp. 96 and 187.

492. [Walsh, B. D., and C. V. Riley.] Museum pest once more. <Amer. Ent., December, 1868, v. 1, p. 80.

Answer to inquiry of G. M. L.; larvæ of *Anthrenus musæorum* injuring whalebone, woolen goods, etc.

493. [Walsh, B. D., and C. V. Riley.] The Tarantula of Texas again. <Amer. Ent., December, 1868, v. 1, p. 80.

Answer to inquiry of C. Peabody; distribution of *Mygale hentzii* in Missouri.

494. [WALSH, B. D., and C. V. RILEY.] The Hessian fly on seed wheat. <Amer. Ent., December, 1868, v. 1, p. 80.

Answer to inquiry of U. Scott; broods and times of transformation of *Cecidomyia destructor.*

495. [WALSH, B. D., and C. V. RILEY.] The apple-root plant-louse. *Eriosoma (Pemphigus) pyri*, Fitch. <Amer. Ent., January, 1869, v. 1, pp. 81–84, figs. 70–72.

Habits, ravages, description, enemies, and parasites of, and means against *Eriosoma pyri* [=*Schizoneura lanigera*]; figures injured root, larva, and adult with details of structure; figures adult plant-louse found on cottonwood; description and figure of larva, puparium, and imago of *Pipiza radicum* n. sp.

496. [WALSH, B. D., and C. V. RILEY.] Ants' nests in gardens. <Amer. Ent., January, 1869, v. 1, p. 84.

Means against ants.

497. [WALSH, B. D., and C. V. RILEY.] The parasites of the human animal. <Amer. Ent., January, 1869, v. 1, pp. 84–88, figs. 73–74.

Brief accounts of *Pediculus humanus* [=*vestimenti*], *P. cervicalis* [=*capitis*], *P.* [=*Pthirius*] *pubis*, *Œstrus* [=*Dermatobia*] *hominis*, *Pulex irritans*, *P.* [=*Sarcopsylla*] *penetrans*, *Acanthia lectularia*, *Conorhinus sanguisuga*, and *Acarus* [=*Sarcoptes*] *scabiei*; figures and habits of *Reduvius* [=*Opsicœtus*] *personatus* and of *Pirates* [=*Rasahus*] *biguttatus*; figure of *Conorhinus sanguisuga*; classificatory relations of *Pediculina* and *Mallophaga.*

498. [WALSH, B. D., and C. V. RILEY.] The coffee borer. <Amer. Ent., January, 1869, v. 1, p. 88.

Unnamed coffee borer injurious to coffee trees in Madras.

499. [WALSH, B. D., and C. V. RILEY.] Strawberry worms. <Amer. Ent., January, 1869, v. 1, pp. 89–91, figs. 75–76.

Description, natural history, ravages, means against, and figures of larva and imago of *Anchylopera* [=*Phoxopteris*] *fragariæ*, n. sp.; figures all stages of *Emphytus* [=*Harpiphorus*] *maculatus*; description of its larva and pupa, its natural history, and means against its ravages.

500. [WALSH, B. D., and C. V. RILEY.] Fungoid growths. <Amer. Ent., January, 1869, v. 1, pp. 91–92.

Mention of instances of the growth of fungi on living plants and animals; letter of S. H. Y. Early on the occurrence of fungoid growths on the larvæ of *Lachnosterna fusca.*

501. [WALSH, B. D., and C. V. RILEY.] Plums for the million. <Amer. Ent., January, 1869, v. 1, pp. 92–93.

Means against *Conotrachelus nenuphar*; notes on varieties of plum exempt from the attacks of the same.

502. [WALSH, B. D., and C. V. RILEY.] The "Colorado grasshopper." <Amer. Ent., January, 1869, v. 1, pp. 95–96.

Answer to inquiries of W. N. Byers and V. Devinny; specific names indicating particular districts can not be changed because the insect is found in other regions.

503. [Walsh, B. D., and C. V. Riley.] Universal remedies. <Amer. Ent., January, 1869, v. 1, p. 97.

Criticism of an advertisement of "Best's patent fruit tree and vine invigorator."

504. [Walsh, B. D., and C. V. Riley.] Complimentary. <Amer. Ent., January, 1869, v. 1, p. 98.

Notices of several notices of the American Entomologist.

505. [Walsh, B. D., and C. V. Riley.] Paper-makers. <Amer. Ent., January, 1869, v. 1, p. 98.

Comparison of the manufacture of paper by man and by the *Vespidæ.*

506. [Walsh, B. D., and C. V. Riley.] On our table. <Amer. Ent., January, 1869, v. 1, p. 98.

Notices of L'Insectologie agricole—Cecil's books of natural history.

507. [Walsh, B. D., and C. V. Riley.] Look out for the eggs of the apple-tree plant-louse. <Amer. Ent., January, 1869, v. 1, p. 99.

Abundance of eggs of *Aphis mali* in winter of 1868–'69, in Missouri and Illinois; means against the same.

508. [Walsh, B. D., and C. V. Riley.] Greenhouse plants [=pests]. <Amer. Ent., January, 1869, v. 1, p. 99.

Means against *Aphididæ, Coccidæ,* and *Tetranychus telarius.*

509. [Walsh, B. D., and C. V. Riley.] How to hatch pupæ. <Amer. Ent., January, 1869, v. 1, p. 99.

Answer to inquiry of D. P. Smith; methods of raising insects.

510. [Walsh, B. D., and C. V. Riley.] Drug-store pests. <Amer. Ent., January, 1869, v. 1, p. 99.

Answer to inquiry of J. M. Good; characters of larva of undertermined ptinid; food-habits of *Ptinus brunneus*; food-habits, characters, and means against *Calandra oryzæ* and *C. granaria.* (See No. 551.)

511. [Walsh, B. D., and C. V. Riley.] Apple-tree worms. <Amer. Ent., January, 1869, v. 1, p. 99.

Answer to inquiry of J. J. Thomas; habits, food-plants, and means against *Phycita nebulo* [=*Acrobasis indiginella*].

512. [Walsh, B. D., and C. V. Riley.] Crane-fly larvæ. Amer. Ent., January, 1869, v. 1, p. 100.

Answer to inquiries of R. D. Alexander and — Hickman; habits of *Tipula* sp.; food-habits of *T. trivittata.*

513. [Walsh, B. D., and C. V. Riley.] Punctured grape canes. <Amer. Ent., January, 1869, v. 1, p. 100.

Answer to inquiry of B. L. Kingsbury; description of punctures in grape canes probably caused by *Orocharis saltator*; means against tree-crickets.

514. [Walsh, B. D., and C. V. Riley.] Insects to be named. <Amer. Ent., January, 1869, v. 1, p. 100.

Answer to inquiry of W. R. Marine; identification of several insects found in apple and peach nurseries.

515. [Walsh, B. D., and C. V. Riley.] Supposed cause of yellows in peach trees. <Amer. Ent., January, 1869, v. 1, p. 100, fig. 77.

Answer to inquiry of C. H. Roberts; yellows of peach-trees a vegetable disease; figure of healthy and diseased limb; affected trees more subject to the attacks of insects than healthy trees.

516. [WALSH, B. D., and C. V. RILEY.] Eggs of katydid. <Amer. Ent., January, 1869, v. 1, p. 100.

Answer to inquiry of A. A. Hilliard; character of the eggs of *Platyphyllum* [= *Cyrtophyllus*] *concavus*.

517. [WALSH, B. D., and C. V. RILEY.] Apple-twig borer. <Amer. Ent., January, 1869, v. 1, p. 100.

Answer to inquiry of J. T. Zimmerman; ravages of *Bostrichus* [= *Amphicerus*] *bicaudatus*.

518. [WALSH, B. D., and C. V. RILEY.] Galls and their architects. <Amer. Ent., February, 1869, v. 1, pp. 101–110, figs. 78–90.

Definition, classification, and variation of galls; accounts of some galls made by *Cynipidæ*, *Cecidomyidæ*, and *Aphididæ* and of the gall-makers; natural history, descriptions, and figures of *Cynips* [= *Amphibolips*] *q.-spongifica*, *C.* [= *A.*] *q.-inanis*, *C.* [= *A.*] *q.-prunus* n. sp., *Cecidomyia s.-strobiloides*, *C. s.-brassicoides*, *C. v.-pomum* n. sp., *C. v.-coryloides* n. sp., *Pemphigus vagabundus*, *P. rhois* and *Colopha ulmicola*; description of the imago of *Cynips q.-prunus* and of *Pemphigus ulmifusus* n. sp., and of the larvæ of the new species of *Cecidomyia*; dimorphism of gall-makers; presence of inquilines and parasites in galls. (See No. 821.)

519. [WALSH, B. D., and C. V. RILEY.] The bogus Colorado potato-bug, *Doryphora juncta*, Germar. <Amer. Ent., February, 1869, v. 1, p. 110.

Food-habits of *D. juncta*.

520. [WALSH, B. D., and C. V. RILEY.] Ants and aphides. <Amer. Ent., February, 1869, v. 1, p. 110.

Inquiry of W. Batchelor, with answer; secretion of honey-dew by *Aphididæ* and harvesting of the same by ants.

521. [WALSH, B. D., and C. V. RILEY.] The Tarantula of Texas, *Mygale hentzii*, Girard. <Amer. Ent., February, 1869, v. 1, p. 11, fig. 91.

Figure of *Mygale hentzii*; habits of *Pompilus* [= *Pepsis*] *formosa*; quotes from G. Lincecum's "The Tarantula killers of Texas" (Amer. Nat., v. 1, pp. 137–141).

522. [WALSH, B. D., and C. V. RILEY.] The melancholy chafer. <Amer. Ent., February, 1869, v. 1, p. 111.

Ravages and figure of the imago of *Euphoria melancholica*.

523. [WALSH, B. D., and C. V. RILEY.] Apple worms (*Carpocapsa pomonella*, Linn.). <Amer. Ent., February, 1869, v. 1, pp. 112–114, fig. 93.

Natural history, ravages, and means against *Carpocapsa pomonella*; figures injured apple, larva, pupa, and imago.

524. [WALSH, B. D., and C. V. RILEY.] The asparagus beetle (*Crioceris asparagi*, Linn.). <Amer. Ent., February, 1869, v. 1, pp. 114–115, fig. 94.

Introduction into the United States; natural history, ravages, parasites of, and means against *Crioceris asparagi*; figure of eggs, larvæ, and imago of the same.

525. [WALSH, B. D., and C. V. RILEY.] A popular delusion. <Amer. Ent., February, 1869, v. 1, p. 116.

No insect passes through all the stages of its growth within one day; life history of *Ephemeridæ*.

526. [WALSH, B. D., and C. V. RILEY.] The squirrel bot. <Amer. Ent., February, 1869, v. 1, v. 117.

Comments on paper by S. S. Rathvon; emasculation of the striped squirrel by *Cuterebra buccata*.

527. [WALSH, B. D., and C. V. RILEY.] [Periodical Cicada.] <Amer. Ent., February, 1869, v. 1, p. 117.

Comments on letter of R. H. Warder; oviposition of *Cicada* [=*Tibicen*] *septendecim* in evergreens.

528. [WALSH, B. D., and C. V. RILEY.] Transformations of insects. <Amer. Ent., February, 1869, v. 1, p. 118.

Brief statement of the stages of growth of insects.

529. [WALSH, B. D., and C. V. RILEY.] Do bees injure raspberries? <Amer. Ent., February, 1869, v. 1, p. 118.

Comments on discussion before New York Fruit Growers' Club as to the effects of bees on flowers and fruits.

530. [WALSH, B. D., and C. V. RILEY.] Best's fruit-tree invigorator again. <Amer. Ent., February, 1869, v. 1, p. 119.

Notice of invention of a new "invigorator" by B. Best.

531. [WALSH, B. D., and C. V. RILEY.] The insect extinguisher, by Joseph Treat, N. J. <Amer. Ent., February, 1869, v. 1, p. 119.

Critical review of pamphlet by J. Treat.

532. [WALSH, B. D., and C. V. RILEY.] More good words. <Amer. Ent., February, 1869, v. 1, p. 119.

Notice of favorable notices of the American Entomologist.

533. [WALSH, B. D., and C. V. RILEY.] Lacewing fly. <Amer. Ent., February, 1869, v. 1, p. 119.

Answer to inquiry of J. Huggins; characters of *Chrysopa* sp.; its hibernation as a pupa and imago.

534. [WALSH, B. D., and C. V. RILEY.] Gigantic water-bug. <Amer. Ent., February, 1869, v. 1, p. 119.

Answer to inquiry of S. E. Munford; food-habits of *Belostoma grandis* [=*americanum*].

535. [WALSH, B. D., and C. V. RILEY.] The white-marked tussock moth again. <Amer. Ent., February, 1869, v. 1, p. 120.

Answer to inquiry of A. S. Fuller; mention of seven parasites attacking *Orgyia leucostigma*.

536. [WALSH, B. D., and C. V. RILEY.] Grasshopper eggs—will they hatch? <Amer. Ent., February, 1869, v. 1, p. 120.

Answer to inquiry of C. J. Jones; frosts not likely to prevent the hatching of the eggs of *Caloptenus spretus*.

537. [WALSH, B. D., and C. V. RILEY.] Injured apple-trees. <Amer. Ent., February, 1869, v. 1, p. 120.

Answer to inquiry of G. C. Broadhead; means against *Chrysobothris femorata*.

538. [WALSH, B. D., and C. V. RILEY.] Bag worms. <Amer. Ent., February, 1869, v. 1, p. 120.

Answer to inquiry of W. W. Butterfield; means against *Thyridopteryx ephemeræformis.*

539. [WALSH, B. D., and C. V. RILEY.] Eggs of the apple-tree plant-louse. <Amer. Ent., February, 1869, v. 1, p. 120.

Answer to inquiry of M. W. Seaman; effect of frosts upon the eggs and larvæ of *Aphis mali.*

540. [WALSH, B. D., and C. V. RILEY.] Insects named. <Amer Ent., February, 1869, v. 1, p. 120.

Answer to inquiry of J. B. Merwin; identification of insects sent; characters of *Vanessa antiopa* and *Cynthia* [=*Pyrameis*] *atalanta.*

541. [WALSH, B. D., and C. V. RILEY.] White grubs. <Amer. Ent., February, 1869, v. 1, p. 120.

Answer to inquiry of W. C. Holmes; undetermined white-grub injuring grass and osage orange.

542. [WALSH, B. D., and C. V. RILEY.] The polyphemus moth, *Attacus polyphemus*, Linn. <Amer. Ent., March, 1869, v. 1, pp. 121–122, fig. 95.

Attacus [=*Telea*] *polyphemus*, *A. cynthia*, and *Bombyx* [=*Sericaria*] *mori* as silk-producers; food-plants, description of larva, habits, and seasons of *A.* [=*T.*] *polyphemus*; figure of the imago; ravages of *A. cecropia*; antennæ mistaken for wings; mention of Lepidoptera having fissured wings.

543. [WALSH, B. D., and C. V. RILEY.] Wasps and their habits. <Amer. Ent., March, 1869, v. 1, pp. 122–143, figs. 96–112.

Structure, classification, and habits of North American predatory Hymenoptera; comparative characters of the digger and true wasps; figure to show the folding of the wing in true wasps; habits and figures of imagos of *Chlorion cæruleum, Bembex fasciata, Sphex ichneumonea, Ammophila pictipennis, Pepsis formosa, Stizus grandis* [=*Sphecius speciosus*], *S.* [=*S.*] *speciosus, Pelopœus lunatus* [=*cementarius*], *Agenia bombycina, Trypoxylon albitarse, Ceropales rufiventris, Eumenes fraternus, Vespa maculata,* and *Polistes rubiginosus*; figure of imago of *Cryptus* [=*Linoceras*] *junceus* and of several nests of wasps. (See No. 375.)

544. [WALSH, B. D., and C. V. RILEY.] Do toads eat worker bees? <Amer. Ent., March, 1869, v. 1, p. 144.

Reprint and review of article by C. Dadant, and of comments of editors of American Bee Journal; usefulness of toads.

545. [WALSH, B. D., and C. V. RILEY.] Best's invigorator once again. <Amer. Ent., March, 1869, v. 1, p. 145.

Condemnation of B. Best's patent fruit tree and vine invigorator.

546. [WALSH, B. D., and C. V. RILEY.] On our table. <Amer. Ent., March, 1869, v. 1, p. 146.

Notices of Nos. 1 and 2 of *Le Naturaliste Canadien.*

547. [WALSH, B. D., and C. V. RILEY.] Sugar-tree borer. <Amer. Ent., March, 1869, v. 1, p. 146.

Answer to inquiry of E. Simms; characters and means against *Arhopalus* [=*Plagionotus*] *speciosus.*

548. [Walsh, B. D., and C. V. Riley.] Swellings on apple scions. <Amer. Ent., March, 1869, v. 1, p. 146.

Answer to inquiry of W. Colwell; dipterous galls on apple scions and basswood twigs.

549. [Walsh, B. D., and C. V. Riley.] Gas-waste *vs.* Curculio. <Amer. Ent., March, 1869, v. 1, p. 147.

Answer to inquiry of H.; merits of gas-waste as an insect destroyer.

550. [Walsh, B. D., and C. V. Riley.] Eggs of the apple-tree plant-louse again. <Amer. Ent., March, 1869, v. 1, p. 147.

Answers to inquiries of C. Williams and W. L. French; means against *Aphis mali.*

551. [Walsh, B. D., and C. V. Riley.] Drug-store pests. <Amer. Ent., March, 1869, v. 1, p. 147.

Answer to inquiry of J. M. Good; food-habits of *Lasioderma serricorne.* See No. 510.

552. [Walsh, B. D., and C. V. Riley.] Small galls and minings on apple-twigs. <Amer. Ent., March, 1869, v. 1, p. 147.

Answer to inquiry of O. O. A. Gardner; characters of undetermined galls and borings in twigs of apple-trees.

553. [Walsh, B. D., and C. V. Riley.] Stinking bugs. <Amer. Ent., March, 1869, v. 1, p. 147.

Answer to inquiry of C. L. Janney; habits of an undescribed *Brachyrhynchus.*

554. [Walsh, B. D., and C. V. Riley.] Eggs in peach-twigs. <Amer. Ent., March, 1869, v. 1, p. 147.

Answer to inquiry of G. Fisher; character of eggs of *Œcanthus niveus.*

555. [Walsh, B. D., and C. V. Riley.] Flat-headed apple-tree borer. <Amer. Ent., March, 1869, v. 1, p. 147.

Answer to inquiry of B. F. Mudge; means against *Chrysobothris femorata.*

556. [Walsh, B. D., and C. V. Riley.] A bundle of entomological queries. <Amer. Ent., March, 1869, v. 1, p. 148.

Answer to inquiry of W. W. Butterfield; mentions several desirable entomological books.

557. [Walsh, B. D., and C. V. Riley.] Grape-berry moth. <Amer. Ent., March, 1869, v. 1, p. 148.

Answer to inquiry of M. C. Read; means against *Penthina vitivorana* [= *Eudemis botrana*].

558. [Walsh, B. D., and C. V. Riley.] Hairy caterpillar. <Amer. Ent., March, 1869, v. 1, p. 148.

Answer to inquiry of T. S. Gold; characters of the larva and imago of *Arctia* [= *Pyrrharctia*] *isabella.*

559. [Walsh, B. D., and C. V. Riley.] Borer in plum-twigs. <Amer. Ent., March, 1869, v. 1, p. 148.

Answer to inquiry of W. Caldwell; undetermined borer, allied to the oak-pruner, in plum-twigs. See No. 606.

560. [Walsh, B. D., and C. V. Riley.] Insects named. <Amer. Ent., March, 1869, v. 1, p. 148.

Answer to inquiry of W. W. Butterfield; identification of insects sent; comparative characters of *Arhopalus* [= *Cyllene*] *pictus* and *A.* [= *C.*] *robiniæ*; variation in *Clytus* [= *Neoclytus*] *capræa*; generic characters of *Arhopalus* and *Clytus.* (See No. 582.)

561. [Walsh, B. D., and C. V. Riley.] Pear-root borer. <Amer. Ent., March, 1869, v. 1, p. 148.

Answer to inquiry of P. Earle; larva of *Prionus laticollis* injurious to the pear and grape.

562. [Walsh, B. D., and C. V. Riley.] Insects named. <Amer. Ent., March, 1869, v. 1, p. 148.

Answer to inquiry of M. H. Boye; *Gryllotalpa longipennis* [= *columbia*] a dimorphic form of *G. borealis.*

563. [Walsh, B. D., and C. V. Riley.] The joint-worm (*Isosoma hordei* Harris). <Amer. Ent., April, 1869, v. 1, pp. 149–158, figs. 113–118.

Natural history, variation, parasites, ravages, and means against *Isosoma hordei*; unity of habits in insects; generic classification of the joint-worm fly; figures male and female imago; figures ♂ and ♀ imagos of *Semiotellus chalcidiphagus* n. sp., *Eurytoma* sp., and *Decatoma* sp., and of ♀ imago of *Antigaster* [= *Eupelmus*] *mirabilis.*

564. [Walsh, B. D., and C. V. Riley.] The wavy-striped flea-beetle. (*Haltica* [*Phyllotreta*] *striolata* Illiger). <Amer. Ent., April, 1869, v. 1, pp. 158–159, fig. 119.

Description, habits, and ravages of *Phyllotreta striolata* [= *vittata*]; figures larva, pupa, and imago of the same; quotes from H. Shimer's "The wavy-striped flea-beetle" (Amer. Nat., December, 1868, v. 2, pp. 514–517).

565. [Walsh, B. D., and C. V. Riley.] Concerning certain smart bugs. <Amer. Ent., April, 1869, v. 1, p. 160.

Preferences of *Phylloxera vitifoliæ* [= *vastatrix*] and *Macrodactylus subspinosus* for certain varieties of grape-vines, of *Doryphora* 10-*lineata* and *Lema trilineata* for certain varieties of potato-vines, and of *Mytilaspis pomicorticis* [= *pomorum*] and *Carpocapsa pomonella* for certain varieties of apple.

566. [Walsh, B. D., and C. V. Riley.] Curculio remedies. <Amer. Ent., April, 1869, v. 1, p. 161.

Comments on essay of L. C. Francis on the plum; coal oil not effective against *Conotrachelus nenuphar.*

567. [Walsh, B. D., and C. V. Riley.] How great wits jump together. <Amer. Ent., April, 1869, v. 1, p. 161.

Stopping holes with hard soap ineffective against borers.

568. [Walsh, B. D., and C. V. Riley.] On our table. <Amer. Ent., April, 1869, v. 1, p. 165.

Notices of Harris's Insects injurious to Vegetation, L'Insectologie agricole, and several other works not entomological.

569. [WALSH, B. D., and C. V. RILEY.] Eggs of the oblong-winged katydid. <Amer. Ent., April, 1869, v. 1, p. 166, fig. 120.

Answer to inquiries of T. A. Thop, J. L. Rice, B. J. Campbell, H. Cheeney, and A. McMoore; eggs of *Phylloptera* [= *Amblycorypha*] *oblongifolia* compared with those of *Platyphyllum* [= *Cyrtophyllus*] *concavum*; figures of the eggs of *A. oblongifolia*.

570. [WALSH, B. D., and C. V. RILEY.] Mossy rose gall. <Amer. Ent., April, 1869, v. 1, p. 166.

Answer to inquiry of F. W. Collins; characters of *Rhodites rosæ* and its gall.

571. [WALSH, B. D., and C. V. RILEY.] Caterpillars on lombardy poplars. <Amer. Ent., April, 1869, v. 1, p. 166.

Answer to inquiry of J. F. Gurley; characters of larva, habits, food-plants, and parasites of *Acronycta acericola* [= *americana*].

572. [WALSH, B. D., and C. V. RILEY.] Museum pests. <Amer. Ent., April, 1869, v. 1, p. 166, fig. 121.

Answer to inquiries of F. W. Hoit, jr., G. M. L., and J. Huggins; figures larva, pupa, and imago of *Anthrenus* sp.; *A. varius* compared with *A. museorum*.

573. [WALSH, B. D., and C. V. RILEY.] Cockroach eggs. <Amer. Ent., April, 1869, v. 1, p. 166.

Answer to inquiry of H. C. Freeman; character of the egg-cases and adult of *Platamodes unicolor*; occurrence of *Ectobia germanica* in Illinois; ravages of species of *Blattidæ*.

574. [WALSH, B. D., and C. V. RILEY.] Apple-tree leaf-crumplers. <Amer. Ent., April, 1869, v. 1, p. 166.

Answer to inquiry of J. F. Jones; result of the work of the larvæ of *Phycita nebulo* [= *Acrobasis indiginella*] on the growth of apple-trees.

575. [WALSH, B. D., and C. V. RILEY.] A most precious bug. <Amer. Ent., April, 1869, v. 1, p. 167.

Answer to inquiry of E. S. Holmes; characters and variety of *Hylecœtus lugubris*; destructiveness of *Lymexylon navale*; use of the maxillary palpi in the ♂♂ of *Lymexylidæ*.

576. [WALSH, B. D., and C. V. RILEY.] Blackberry-cane borers. <Amer. Ent., April, 1869, v. 1, p. 167.

Answer to inquiry of C. Parry; characters and habits of larva of unnamed borer [= *Bembecia marginata*]; plants affected by species of *Ægeriadæ*.

577. [WALSH, B. D., and C. V. RILEY.] Rows of eggs in pear-twigs. <Amer. Ent., April, 1869, v. 1, p. 167.

Answer to inquiry of H. C. Freeman; characters of unknown eggs found in pear-twigs.

578. [WALSH, B. D., and C. V. RILEY.] An orchard giving out. <Amer. Ent., April, 1869, v. 1, p. 168.

Answer to inquiry of W. M. Clemens; habits and means against *Saperda bivittata* [= *candida*] and *Chrysobothris femorata*.

579. [WALSH, B. D., and C. V. RILEY.] Plant-louse eggs on apple and mountain ash. <Amer. Ent., April, 1869, v. 1, p. 168.

Answer to inquiry of W. Stewart; eggs of *Aphis mali* on apple-twigs and probably on those of mountain ash; *Aspidiotus harrisii* [= *Chionaspis furfurus*] infests both trees.

580. [WALSH, B. D., and C. V. RILEY.] Gigantic rhinoceros beetle. <Amer. Ent., April, 1869, v. 1, p. 168.

Answer to inquiry of F. G. Smith; characters of *Dynastes tityrus.*

581. [WALSH, B. D., and C. V. RILEY.] Bee queries. <Amer. Ent., April, 1869, v. 1, p. 168.

Answer to inquiry of W. R. Howard; *Galleria cereana* always injurious; a new swarm composed of both old and new bees.

582. [WALSH, B. D., and C. V. RILEY.] Insects named. <Amer. Ent., April, 1869, v. 1, p. 168.

Answer to inquiry of W. W. Butterfield; characters of *Clytus* [=*Neoclytus*] *caprœa.* (See No. 560.)

583. [WALSH, B. D., and C. V. RILEY.] Elm-tree borer. <Amer. Ent., April, 1869, v. 1, p. 168.

Answer to inquiry of W. M. Gregory; *Saperda lateralis* and *Dryobius sexfasciatus* attack the elm in the larva state. (See No. 696.)

584. [WALSH, B. D., and C. V. RILEY.] The chinch-bug (*Micropus leucopterus* Say). <Amer. Ent., 1869, v. 1, May, pp. 169–177, fig. 122; June, pp. 194–199, figs. 135–139. Reprint: <2d Ann. Rept. State Ent. Mo., March, 1870, pp. 15–37, figs. 1–10.

See No. 1127 for synopsis of contents.

585. [WALSH, B. D., and C. V. RILEY.] The grape-berry moth (*Penthina vitivorana*, Packard). <Amer. Ent., May, 1869, v. 1, pp. 177–179, figs. 123–125.

Natural history, ravages, and means against *Penthina vitivorana* [=*Eudemis botrana*]; figures, larva, pupa, cocoon, imago, and injured grape.

586. [WALSH, B. D., and C. V. RILEY.] Poisonous flour. <Amer. Ent., May, 1869, v. 1, p. 179.

Application of the term weevil; vesicatory properties of *Sitophilus* [=*Calandra*] *granaria*; poisonous nature of flour made from wheat infested by these insects.

587. [WALSH, B. D., and C. V. RILEY.] Mounding peach-trees. <Amer. Ent., May, 1869, v. 1, pp. 180–181, fig. 126.

Mounding as a means against *Sannina exitiosa*; figures ♂ and ♀ of the same.

588. [WALSH, B. D., and C. V. RILEY.] Going it blind. <Amer. Ent., May, 1869, v. 1, pp. 182–183.

Remarks on the failure of persons to observe correctly.

589. [WALSH, B. D., and C. V. RILEY.] Another new Curculio humbug. <Amer. Ent., May, 1869, v. 1, p. 183.

Extract from "agricultural paper," with comments on proposed means against *Conotrachelus nenuphar.*

590. [WALSH, B. D., and C. V. RILEY.] Rear-horses *vs.* grasshoppers. <Amer. Ent., May, 1869, v. 1, p. 184, figs. 127–128.

Vernacular names of *Mantis* [=*Phasmomantis*] *carolina*; its usefulness; figures of eggs and ♂ and ♀ imago.

591. [WALSH, B. D., and C. V. RILEY.] Apple tree plant-lice. (*Aphis mali*, Linn.) <Amer. Ent., May, 1869, v. 1, p. 184.

Abundance of *Aphis mali* in several localities; its comparative harmlessness; means against it.

592. [WALSH, B. D., and C. V. RILEY.] Crack-jaw names. <Amer. Ent., May, 1869, v. 1, p. 184.

Combination of vernacular and technical names for the accommodation of different classes of readers.

593. [WALSH, B. D., and C. V. RILEY.] Send plenty of specimens. <Amer. Ent., May, 1869, v. 1, p. 185.

Reasons why several specimens of insects should be sent for examination.

594. [WALSH, B. D., and C. V. RILEY.] White-grub fungus. <Amer. Ent., May, 1869, v. 1, p. 186, fig. 129.

Answer to inquiries of J. Smith and of T. J. Freeman; larva of *Lachnosterna fusca* infested with *Cordyceps ravenelii*; figure of infested larva.

595. [WALSH, B. D., and C. V. RILEY.] "Buck fly." <Amer. Ent., May, 1869, v. 1, p. 186.

Answer to inquiry of G. W. Copley; characters of larva and imago of *Saturnia* [= *Hemileuca*] *maia*; food-plants of the larva.

596. [WALSH, B. D., and C. V. RILEY.] Swarms of minute flies in rooms. <Amer. Ent., May, 1869, v. 1, p. 186.

Answer to inquiry of S. S. Rathvon; habitat of larva of *Sciara* sp.

597. [WALSH, B. D., and C. V. RILEY.] Worms in osage orange seed. <Amer. Ent., May, 1869, v. 1, p. 186.

Answer to inquiry of A. Plant; habits of the larva of an undetermined dipteron found among osage orange seed.

598. [WALSH, B. D., and C. V. RILEY.] Insects to be named. <Amer. Ent., May, 1869, v. 1, p. 186.

Answer to inquiry of X. Q. Z.; value of names to a collection of insects.

599. [WALSH, B. D., and C. V. RILEY.] The spotted lady-bird. <Amer. Ent., May, 1869, v. 1, p. 186, fig. 130.

Answer to inquiry of R. Seevers; value of *Hippodamia* [= *Megilla*] *maculata* as a destroyer of noxious insects; figure of the same.

600. [WALSH, B. D., and C. V. RILEY.] Eggs of the white-marked tussock moth. <Amer. Ent., May, 1869, v. 1, p. 186.

Answer to inquiry of S. G. Knight; characters of eggs of *Orgyia leucostigma*.

601. [WALSH, B. D., and C. V. RILEY.] Owl's pellets. <Amer. Ent., May, 1869, v. 1, p. 187.

Answer to inquiry of C. H. G.; presence of injurious insects in the pellets disgorged by owls [= hawks]. See No. 643.

602. [WALSH, B. D., and C. V. RILEY.] Crab-apple borers. <Amer. Ent., May, 1869, v. 1, p. 187.

Answer to inquiry of J. Huggins; characters of undetermined lepidopterous borer infesting crab-apple trees.

603. [WALSH, B. D., and C. V. RILEY.] Mosquitoes. <Amer. Ent., May, 1869, v. 1, p. 187.

Answer to inquiry of A. M. Abbott; life-habits of *Culicidæ*; benefits derived from the same.

604. [WALSH, B. D., and C. V. RILEY.] Large silken cocoon. <Amer. Ent., May, 1869, v. 1, p. 187.

Answer to inquiry of W. W. Butterfield; food-habits of *Attacus promethea*.

605. [WALSH, B. D., and C. V. RILEY.] Bugs in alcohol. <Amer. Ent., May, 1869, v. 1, p. 187,

Answer to inquiry of D. P. Smith; alcohol as a means of preserving insects.

606. [WALSH, B. D., and C. V. RILEY.] Borer in plum-twig. <Amer. Ent., May, 1869, v. 1, p. 187.

Answer to inquiry of W. Colwell; *Elaphidion parallelum* [=*villosum*] bred from plum-twigs; it does not prune the twig. See No. 559.

607. [WALSH, B. D., and C. V. RILEY.] Eggs of cut-worm moth. <Amer. Ent., May, 1869, v. 1, p. 188, fig. 131.

Answer to inquiries of G. Pauls, T. A. Thorp, and E. S. Foster; characters and figure of eggs of *Agrotis inermis* [=*saucia*]; characters and habits of the larva.

608. [WALSH, B. D., and C. V. RILEY.] Snow fleas. <Amer. Ent., May, 1869, v. 1, p. 188.

Answer to inquiry of H. H. G. Bradt; habits and food of *Podura* [=*Achorutes*] *nivicola*.

609. [WALSH, B. D., and C. V. RILEY.] Fuzzy galls on blackberry-twigs. <Amer. Ent., May, 1869, v. 1, p. 188.

Answer to inquiry of J. Huggins; characters of *Diastrophus cuscutæformis* and its gall.

610. [WALSH, B. D., and C. V. RILEY.] Pithy galls on blackberry-twigs. <Amer. Ent., May, 1869, v. 1, p. 188.

Answer to inquiry of T. W. Gordon; characters of the gall made by *Diastrophus nebulosus*.

611. [WALSH, B. D., and C. V. RILEY.] Moth eggs. <Amer. Ent., May, 1869, v. 1, p. 188.

Answer to inquiries of A. M. Shute and of J. Huggins; characters of the eggs of an undetermined moth.

612. [WALSH, B. D., and C. V. RILEY.] Horse-hair snakes. <Amer. Ent., May, 1869, v. 1, p. 188.

Answer to inquiry of A. M. Abbott; characters and habitats of *Gordiacœa*.

613. [WALSH, B. D., and C. V. RILEY.] Imitative butterflies. <Amer. Ent., June, 1869, v. 1, pp. 189–193, figs. 132–134.

Immunity of *Danaidæ* from and liability of *Pieridæ* to the attacks of predatory animals; mimicry of *Danaidæ* by *Pieridæ* and of *Danais archippus* by *Limenitis disippus*; hibernating habits and description of the larva of the latter, with figures of its larva, chrysalis, imago, and hibernaculum; figure of *Danais archippus*; theory of the origin of mimicry.

614. [WALSH, B. D., and C. V. RILEY.] Cabbage-worms upon gilly-flowers. <Amer. Ent., June, 1869, v. 1, p. 199.

Habits and food-plants, seasons, and synonyms of *Plutella cruciferarum*.

615. [WALSH, B. D., and C. V. RILEY.] "Wasps and their habits." <Amer. Ent., June, 1869, v. 1, p. 200.

Comments on letter of S. S. Rathvon; species having essentially different habits though externally indistinguishable should be considered specifically distinct.

616. [WALSH, B. D., and C. V. RILEY.] The social wasps. <Amer. Ent., June, 1869, v. 1, p. 201.

Comments on paper by D. A. A. Nichols; habits of *Vespa crabro*.

617. [WALSH, B. D., and C. V. RILEY.] Mounding peach-trees. <Amer. Ent., June, 1869, v. 1, pp. 201–202.

Comments on letter of R. L. Wells; success of the mounding system against *Ægeria* [=*Sannina*] *exitiosa*.

618. [WALSH, B. D., and C. V. RILEY.] Out of evil there cometh good. <Amer. Ent., June, 1869, v. 1, p. 202.

Probable abundance of the fruit crop in southern Illinois and in Missouri in 1869 due to the pruning of the trees by *Tibicen septendecim* in 1868.

619. [WALSH, B. D., and C. V. RILEY.] The periodical Cicada. <Amer. Ent., June, 1869, v. 1, p. 202.

Extract from No. 474; request for information of the appearance of *Cicada* [=*Tibicen*] *septendecim* in any part of the United States in 1869.

620. [WALSH, B. D., and C. V. RILEY.] The Curculio scarcer than last year. <Amer. Ent., June, 1869, v. 1, p. 202.

Extract from letter of A. M. Brown; comparative scarcity of *Conotrachelus nenuphar* in 1869.

621. [WALSH, B. D., and C. V. RILEY.] The American Entomological Society. <Amer. Ent., June, 1869, v. 1, p. 203.

Notice of the formation, publications, aims, and needs of the American Entomological Society; proposition for the raising of a fund for the support of the society.

622. [WALSH, B. D., and C. V. RILEY.] Remarkable peculiarity in the insect world. <Amer. Ent., June, 1869, v. 1, p. 204.

Insects contrasted with animals of other groups; as a rule they produce but one brood of offspring in the course of their lives.

623. [WALSH, B. D., and C. V. RILEY.] On our table. <Amer. Ent., June, 1869, v. 1, pp. 204–205.

Notices of: The Harris correspondence; The butterflies of North America, by W. H. Edwards; Guide to the study of insects, by A. S. Packard, jr.

624. [WALSH, B. D., and C. V. RILEY.] Cannibal mites. <Amer. Ent., June, 1869, v. 1, p. 205.

Answer to inquiry of C. S. Davis; *Trombidium* sp. found preying on grasshopper eggs.

625. [WALSH, B. D., and C. V. RILEY.] Gnats. <Amer. Ent., June, 1869, v. 1, p. 205.

Answer to inquiry of W. O. Hiskey; distinctive characters of *Culex* and *Chironomus*; appearance of "clouds" of *Chironomus*.

626. [WALSH, B. D., and C. V. RILEY.] Cut-worms severing cabbage plants. <Amer. Ent., June, 1869, v. 1, p. 205.

Answer to inquiry of N. C. Burch; characters of the larva of *Agrotis telifera* [=*ypsilon*].

627. [WALSH, B. D., and C. V. RILEY.] Beetle named. <Amer. Ent., June, 1869, v. 1, p. 205.

Answer to inquiry of J. M. Shaffer; *Anisodactylus baltimorensis* flying in great numbers at Fairfield, Iowa.

628. [WALSH, B. D., and C. V. RILEY.] Tiger beetles. <Amer. Ent., June, 1869, v. 1, p. 205.

Answer to inquiry of J. M. Shaffer; habitat of *Cicindela vulgaris*.

629. [WALSH, B. D., and C. V. RILEY.] Cocoons and chrysalids named. <Amer. Ent., June, 1869, v. 1, p. 206.

Answer to inquiry of A. S. Fuller; characters of larva and imago of *Ceratocampa* [= *Citheronia*] *regalis*; food-plants of its larva; characters of the cocoons of *Attacus promethea, A. cecropia, A.* [= *Telea*] *polyphemus.* and of *Thyridopteryx ephemeræformis.*

630. [WALSH, B. D., and C. V. RILEY.] White-lined morning Sphinx. <Amer. Ent., June, 1869, v. 1, p. 206.

Answer to inquiry of S. Blanchard; characters, transformations, habits, and distribution of *Deilephila lineata*; food-plants of its larva.

631. [WALSH, B. D., and C. V. RILEY.] Insects named. <Amer. Ent., June, 1869, v. 1, p. 206.

Answer to inquiry of W. W. Butterfield; identification of insects sent; differences between the spring and autumn broods of *Drasteria erechtea.*

632. [WALSH, B. D., and C. V. RILEY.] Peach-twig borer. <Amer. Ent., June, 1869, v. 1, p. 206, fig. 140.

Answer to inquiry of W. Muir; characters, habits, and figure of the larva of *Gortyna nitela.*

633. [WALSH, B. D., and C. V. RILEY.] The apple-twig borer. <Amer. Ent., June, 1869, v. 1, p. 206, fig. 141.

Answer to inquiry of A. Hinckley; habits, sexual differences, and figure of *Bostrichus* [= *Amphicerus*] *bicaudatus.*

634. [WALSH, B. D., and C. V. RILEY.] Apple-tree borers on south side of trees. <Amer. Ent., June, 1869, v. 1, p. 206.

Answer to inquiry of J. F. Wielandy; preference shown for the south and southwest sides of trees by the larva of *Chrysobothris femorata.*

635. [WALSH, B. D., and C. V. RILEY.] Cocoons of the Cecropia moth. <Amer. Ent., June, 1869, v. 1, p. 206.

Answer to inquiry of T. W. Gordon; comparison between the cocoons of *Telea polyphemus* and *Attacus cecropia.*

636. [WALSH, B. D., and C. V. RILEY.] Flea-beetles. <Amer. Ent., June, 1869, v. 1, p. 206.

Answer to inquiry of F. Hecker; characters of an undescribed *Longitarsus* infesting wheat fields.

637. [WALSH, B. D., and C. V. RILEY.] Strawberry bugs. <Amer. Ent., June, 1869, v. 1, p. 207.

Answer to inquiry of J. M. Pearson; characters, ravages, and means against *Corimelæna pulicaria.*

638. [WALSH, B. D., and C. V. RILEY.] Eggs on apple-trees. <Amer. Ent., June, 1869, v. 1, p. 207, fig. 142.

Answer to inquiry of H. Compton; characters of eggs of *Sinea diadema*; figure of the imago; its value as a destroyer of canker-worms.

639. [WALSH, B. D., and C. V. RILEY.] Lady-bird larvæ. <Amer. Ent., June, 1869, v. 1, p. 207, fig. 143.

Answer to inquiry of E. S. Foster; characters of the larva of *Hippodamia convergens*; figures its larva, pupa, and imago; usefulness of *Coccinellidæ.*

640. [Walsh, B. D., and C. V. Riley.] White-grub fungus, again. <Amer. Ent., June, 1869, v. 1, p. 207, fig. 144.

Answer to inquiry of W. C. Holmes; figures larva of *Lachnosterna fusca* attacked by *Cordyceps ravenelii.*

641. [Walsh, B. D., and C. V. Riley.] Bag-worms. <Amer. Ent., June, 1869, v. 1, p. 207.

Answer to inquiry of C. Parry; means against *Thyridopteryx ephemeræformis.*

642. [Walsh, B. D., and C. V. Riley.] Tent-caterpillar. <Amer. Ent., June, 1869, v. 1, p. 208, fig. 145.

Answer to inquiry of S. Blanchard; characters of the imago and figures of the early stages of *Clisiocampa americana*; means against the same.

643. [Walsh, B. D., and C. V. Riley.] Hawk's pellets. <Amer. Ent., June, 1869, v. 1, p. 208.

Answer to inquiry of C. H. G.; insectivorous habits of *Buteo pennsylvanicus.* See No. 601.

644. [Walsh, B. D., and C. V. Riley.] Plant lice on berberry. <Amer. Ent., June, 1869, v. 1, p. 208.

Answer to inquiry of J. R. Preston; means against *Aphididæ.*

645. [Walsh, B. D., and C. V. Riley.] Tent-caterpillar of the forest. <Amer. Ent., June, 1869, v. 1, p. 208, fig. 146.

Answer to inquiry of G. Whitcomb; characters, habits, parasites, means against, and figure of larva of *Clisiocampa sylvatica* [= *disstria*].

646. [Walsh, B. D., and C. V. Riley.] Cotton insects. <Amer. Ent., July, 1869, v. 1, pp. 209–214, fig. 147–151.

Descriptions and figures of all stages of *Aletia xylina* and of *Heliothis armigera*; habits, seasons, ravages, food-plants of, and means against the same; figures larva of *Clisiocampa sylvatica* [= *disstria*].

647. [Walsh, B. D., and C. V. Riley.] The true Army-worm (*Leucania unipuncta* Haworth). <Amer. Ent., July, 1869, v. 1, pp. 214–217, fig. 152–155.

Descriptions and figures of larva, pupa, and imago of *Leucania unipuncta*; seasons, ravages, and enemies of the same; figure of *Exorista militaris* [= *Nemoræa leucaniæ*].

648. [Walsh, B. D., and C. V. Riley.] Belated individuals of the periodical Cicada. <Amer. Ent., July, 1869, v. 1, p. 217.

Occurrence of scattering individuals of *Tibicen septendecim* in years before or after their regular period.

649. [Walsh, B. D., and C. V. Riley.] Is the Curculio scarcer than it was last year? <Amer. Ent., July, 1869, v. 1, pp. 217, 218.

Record of observations to prove the comparative scarcity of *Conotrachelus nenuphar* during 1869.

650. [Walsh, B. D., and C. V. Riley.] To destroy Colorado potato bugs. <Amer. Ent., July, 1869, v. 1, p. 219.

Reprint of communication of G. Liddle, with comments; Paris green as a means against *Doryphora* 10-*lineata.*

651. [Walsh, B. D., and C. V. Riley.] Dr. Hull's Curculio-catcher. <Amer. Ent., June, 1869, v. 1, pp. 220–221, fig. 156.

Description and figure of Hull's Curculio-catcher.

652. [WALSH, B. D., and C. V. RILEY.] The New York weevil (*Ithycerus noveboracensis*, Forster). <Amer. Ent., July, 1869, v. 1, pp. 221–222, fig. 157.

Habits, food-plants, distribution, description, and figure of larva and imago of *Ithycerus noveboracensis*; means against the same.

653. [WALSH, B. D., and C. V. RILEY.] Mounding peach-trees again. <Amer. Ent., July, 1869, v. 1, p. 223.

Letter of A. Dean, with comments; characters and habitat of *Mycetophila persicæ.*

654. [WALSH, B. D., and C. V. RILEY.] Overcrowded. <Amer. Ent., July, 1869, v. 1, p. 223.

Duties of a State entomologist; impossibility of answering inquiries received during the past month.

655. [WALSH, B. D., and C. V. RILEY.] No air-holes needed in sending insects. <Amer. Ent., July, 1869, v. 1, p. 223.

Directions for sending living insects.

656. [WALSH, B. D., and C. V. RILEY.] Plum-leaf worms. <Amer. Ent., July, 1869, v. 1, p. 223.

Answer to inquiry of W. D. Hiskey; characters of larva of *Lyda* sp.

657. [WALSH, B. D., and C. V. RILEY.] Seed-corn maggot. <Amer. Ent., July, 1869, v. 1, p. 224, figs. 138–139.

Answer to inquiry of G. Pauls; characters, ravages, means against, and figure of larva of *Anthomyia zeas*; characters of the imago; figure of the puparium.

658. [WALSH, B. D., and C. V. RILEY.] Cut-worms. <Amer. Ent., July, 1869, v. 1, p. 224.

Answer to inquiry of N. C. Birch; ravages of *Agrotis telifera* [=*ypsilon*].

659. [WALSH, B. D., and C. V. RILEY.] New York weevil. <Amer. Ent., July, 1869, v. 1, p. 224.

Answer to inquiries of D. H. Kauffman and of W. D. Turrill; ravages of *Ithycerus noveboracensis.*

660. [WALSH, B. D., and C. V. RILEY.] Insects around peach-trees. <Amer. Ent., July, 1869, v. 1, p. 224.

Answer to inquiry of G. C. Brodhead; larvæ of *Asilus* sp. and of *Mycetophila persicæ* found around roots of peach-trees.

661. [WALSH, B. D., and C. V. RILEY.] Large green worm in a peach. <Amer. Ent., July, 1869, v. 1, p. 224.

Answer to inquiry of G. Wilgus; characters and food-habits of an undetermined larva found in a peach.

662. [WALSH, B. D., and C. V. RILEY.] Ichneumon flies. <Amer. Ent., July, 1869, v. 1, p. 224.

Answer to inquiry of H. Klinehaus; characters and figure of cocoons of *Microgaster* sp.

663. [WALSH, B. D., and C. V. RILEY.] Raspberry worms. <Amer. Ent., July, 1869, v. 1, p. 224.

Answer to inquiry of B. Borden; characters and ravages of *Selandria* [=*Monophadnus*] *rubi.*

664. [WALSH, B. D., and C. V. RILEY.] Hairy grape-leaf folders. <Amer. Ent., July, 1869, v. 1, p. 224.

Answer to inquiry of A. C. Davis; characters of larva and imago of *Pterophorus* [= *Oxyptilus*] *periscelidactylus.*

665. [WALSH, B. D., and C. V. RILEY.] Row of eggs in maple-twigs. <Amer. Ent., July, 1869, v. 1, p. 224.

Answer to inquiry of J. Bower; characters of eggs of undetermined katydid.

666. [WALSH, B. D., and C. V. RILEY.] Butterfly named. <Amer. Ent., July, 1869, v. 1, p. 224.

Answer to inquiry of A. R. Bodley; characters of *Papilio marcellus*; food-plants of its larva.

667. [WALSH, B. D., and C. V. RILEY.] Grasshopper's eggs. <Amer. Ent., July, 1869, v. 1, p. 224.

Answer to inquiry of E. P. Burlingame; characters of the eggs of an undetermined grasshopper and of the imago of *Œdipoda* [= *Dissosteria*] *carolina.*

668. [WALSH, B. D., and C. V. RILEY.] Asilus fly larvæ. <Amer. Ent., July, 1869, v. 1, p. 225, figs. 161-162.

Answer to inquiry of G. Pauls; characters, habits, and figure of larva of *Asilus* sp.; food-habits of larva and imago of *A. sericeus*; figure of the imago of the same; *Trupanea* [= *Promachus*] *apivorus* as a destroyer of bees.

669. [WALSH, B. D., and C. V. RILEY.] New insect-foe of the blackberry. <Amer. Ent., July, 1869, v. 1, p. 225.

Answer to inquiry of C. Parry; comparative characters of *Aphididæ* and *Psyllidæ*; habits of *Psylla rubi* [= *Trioza tripunctata*].

670. [WALSH, B. D., and C. V. RILEY.] Army-worm. <Amer. Ent., July, 1869, v. 1, p. 225.

Answer to inquiry of J. H. Butts; ravages and food-plants of *Leucania unipuncta.*

671. [WALSH, B. D., and C. V. RILEY.] Green grape-vine worm. <Amer. Ent., July, 1869, v. 1, p. 225, fig. 163.

Answer to inquiry of G. Pauls; characters, food-plants, and figure of larva of *Pyrophila pyramidoides.*

672. [WALSH, B. D., and C. V. RILEY.] Rose slug. <Amer. Ent., July, 1869, v. 1, p. 225.

Answer to inquiries of G. W. Copley and B. S. Morris; characters, ravages, and means against *Selandria* [= *Monostegia*] *rosæ.*

673. [WALSH, B. D., and C. V. RILEY.] Insects named. <Amer. Ent., July, 1869, v. 1, p. 225.

Answer to inquiry of J. Weed; food-habits of *Leptostylus aculiferus* and of *Podabrus modestus.*

674. [WALSH. B. D., and C. V. RILEY.] Chrysalis of the virgin tiger moth. <Amer. Ent., July, 1869, v. 1, p. 225.

Answer to inquiry of C. Mallinckrodt; characters of *Arctia virgo*; supposed food-plants of its larva.

675. [WALSH, B. D., and C. V. RILEY.] Clover-worms. <Amer. Ent., July, 1869, v. 1, p. 226, fig. 164.

Answer to inquiry of E. P. Flanders; characters of *Asopia costalis*; habits of its larva; figures larva, pupa, cocoon, and imago.

676. [WALSH, B. D., and C. V. RILEY.] Raspberry brand. <Amer. Ent., July, 1869, v. 1, p. 226.

Answer to inquiry of J. M. Beecher; larva of small gnat feeding on raspberry-brand.

677. [WALSH, B. D., and C. V. RILEY.] Rose-worms. <Amer. Ent., July, 1869, v. 1, p. 226.

Answer to inquiry of G. S. Grover; character, ravages, food-plants, and means against *Heliothis margidens* [= *Pyrrhia exprimens*].

678. [WALSH, B. D., and C. V. RILEY.] Plum-tree plant-lice. <Amer. Ent., July, 1869, v. 1, p. 226, figs. 165–167.

Answer to inquiry of T. W. Gordon; characters of *Aphis prunifoliæ* and *A.* [= *Myzus*] *cerasi*; ravages, enemies, and means against *Aphididæ*; figures larva of coccinellid, syrphid and hemerobi l.

679. [WALSH, B. D., and C. V. RILEY.] Ichneumon-flies. <Amer. Ent., July, 1869, v. 1, p. 226.

Answer to inquiries of S. J. Throp and J. E. Trabue; life-habits of *Microgaster* sp.?

680. [WALSH, B. D., and C. V. RILEY.] A new Curculio humbug. <Amer. Ent., July, 1869, v. 1, p. 226.

Answer to inquiry of E. P. Flanders; uselessness of a patent lamp for destroying *Conotrachelus nenuphar*.

681. [WALSH, B. D., and C. V. RILEY.] Sweet-potato beetles. <Amer. Ent., July, 1869, v. 1, p. 227.

Answer to inquiries of Subscriber and A. E. Trabue; food-habits and characters of larva and imago of *Coptocycla aurichalcea* and of *C.* [= *Cassida*] *bivittata*.

682. [WALSH, B. D., and C. V. RILEY.] Injured strawberry and grape-vines. <Amer. Ent., July, 1869, v. 1, p. 227.

Answer to inquiry of W. P. Pierson; ravages of *Capsus oblineatus* [= *Lygus pratensis*].

683. [WALSH, B. D., and C. V. RILEY.] Plum-tree insects. <Amer. Ent., July, 1869, v. 1, p. 227.

Answer to inquiry of J. F. Waters; characters of *Bibio albipennis*; food-habits of its larva.

684. [WALSH, B. D., and C. V. RILEY.] Apple-tree bugs. <Amer. Ent., July, 1869, v. 1, p. 227.

Answer to inquiry of W. L. Youse; character of *Brochymena annulata*.

685. [WALSH, B. D., and C. V. RILEY.] Hickory-stem gall-louse. <Amer. Ent., July, 1869, v. 1, p. 227.

Answer to inquiry of B. F. Long; characters of galls of *Phylloxera caryæcaulis*; food-habits of *Thrips*.

686. [WALSH, B. D., and C. V. RILEY.] Grape-vine leaf-hopper. <Amer. Ent., July, 1869, v. 1, p. 227.

Answer to inquiry of R. M. Copeland; means against *Tettigonia* [= *Typhlocyba*] *vitis*.

687. [WALSH, B. D., and C. V. RILEY.] Twelve-spotted Diabrotica. <Amer. Ent., July, 1869, v. 1, p. 227, fig. 168.

Answer to inquiries of E. S. Foster and R. D. Parker; characters and means against *Diabrotica 12-punctata*; figure of the same.

688. [WALSH, B. D., and C. V. RILEY.] The caterpillar of the forest. <Amer. Ent., July, 1869, v. 1, p. 227.

Answer to inquiry of M. McKenzie; food-habits and means against *Clisiocampa sylvatica* [=*disstria*].

689. [WALSH, B. D., and C. V. RILEY.] Strawberry destroyer. <Amer. Ent., July, 1869, v. 1, p. 227.

Answer to inquiry of G. W. Copley; habits of unknown strawberry destroyer.

690. [WALSH, B. D., and C. V. RILEY.] Eggs of bugs on strawberry. <Amer. Ent., July, 1869, v. 1, p. 227.

Answer to inquiry of A. S. Fuller; characters of eggs of unknown reduvid attacked by parasites.

691. [WALSH, B. D., and C. V. RILEY.] Frog-spittle insects. <Amer. Ent., July, 1869, v. 1, p. 228. Reprint: <Cultivator and Country Gentleman, 29 July, 1869, v. 34, p. 82.

Answer to inquiry of J. B. Hartwell; habits, characters, and injuries of *Aphrophora quadrangularis.*

692. [WALSH, B. D., and C. V. RILEY.] Eggs of ground-beetle. <Amer. Ent., July, 1869, v. 1, p. 228.

Answer to inquiry of E. J. Ayres; characters of eggs of undetermined ground-beetle found under bark of pear-twigs.

693. [WALSH, B. D., and C. V. RILEY.] New insect-foe of the potato. <Amer. Ent., July, 1869, v. 1, p. 228.

Answer to inquiry of I. Hicks; food-habits of *Cassida* [= *Coptocycla*] *clavata.*

694. [WALSH, B. D., and C. V. RILEY.] Tomato-stalk borer. <Amer. Ent., July, 1869, v. 1, p. 228.

Answer to inquiry of E. J. Ayres; *Gortyna nitela* injurious to tomato-stalks.

695. [WALSH, B. D., and C. V. RILEY.] Breeding cages. <Amer. Ent., July, 1869, v. 1, p. 228.

Answer to inquiry of H. S. Redney; description of cage for breeding insects.

696. [WALSH, B. D., and C. V. RILEY.] Elm-tree borer. <Amer. Ent., July, 1869, v. 1, p. 228.

Answer to inquiry of W. M. Gregory; characters and food-habits of *Physocnemum brevilineum.* See No. 583.

697. [WALSH, B. D., and C. V. RILEY.] Peach-twig borer. <Amer. Ent., July, 1869, v. 1, p. 228.

Answer to inquiry of G. Fisher; means against undetermined lepidopterous borer in twigs of peach.

698. [WALSH, B. D., and C. V. RILEY.] Eggs of periodical Cicada in savin-twig. <Amer. Ent., July 1869, v. 1, p. 228.

Answer to inquiry of J. A. Greason; *Tibicen septendecim* ovipositing in twigs of *Juniperus sabina.*

699. [WALSH, B. D., and C. V. RILEY.] Elm-tree saw-fly. <Amer. Ent., July, 1869, v. 1, p. 228.

Answer to inquiry of A. R. Whitney; characters of larva and imago of *Cimbex laportei* [= *americana*]; food-plants of its larva.

700. [WALSH, B. D., and C. V. RILEY.] Snout-beetle. <Amer. Ent., July, 1869, v. 1, p. 228.

Answer to inquiry of H. Kleinhaus; supposed food-habits of *Hylobius confusus.*

701. [Walsh, B. D., and C. V. Riley.] The close of the first volume. <Amer. Ent., August, 1869, v. 1, p. 229.

Prospectus of the second volume of the *American Entomologist.*

702. [Walsh, B. D., and C. V. Riley.] The Royal horned caterpillar. (*Ceratocampa* (*Citheronia*) *regalis*, Fabr.). <Amer. Ent., August, 1869, v. 1, pp. 230–231, pl. 1.

Habits, seasons, sexual characters, food-plants, and vernacular names of *Citheronia regalis*; descriptions and figures of larva and pupa; figure of larva, pupa, and imago.

703. [Walsh, B. D., and C. V. Riley.] Comparative scarcity of the Curculio again. <Amer. Ent., August, 1869, v. 1, p. 241.

Observations on the comparative abundance of *Conotrachelus nenuphar* during the early summer of 1869.

704. [Walsh, B. D., and C. V. Riley.] A possible cause of the bee disease. <Amer. Ent., August, 1869, v. 1, pp. 241–242.

Reprint of article by P. H. Philbrook (Amer. Bee Journal, May, 1869), with comments; dipterous enemies of the honey-bee.

705. [Walsh, B. D., and C. V. Riley.] Ash and mountain ash. <Amer. Ent., August, 1869, v. 1, pp. 243–244.

Criticisms of paper of H. Shimer (Trans. Ill. State Hortic. Soc., 1868).

706. [Walsh, B. D., and C. V. Riley.] How the Curculio flies by night. <Amer. Ent., August, 1869, v. 1, p. 244.

Extract from lecture by I. P. Trimble, with comment.

707. [Walsh, B. D., and C. V. Riley.] The periodical Cicada; our first brood established. <Amer. Ent., August, 1869, v. 1, p. 244.

Appearance in Connecticut of a brood of *Tibicen septendecim* in 1869.

708. [Walsh, B. D., and C. V. Riley.] Be on the guard. <Amer. Ent., August, 1869, v. 1, p. 244.

Need of care in the transportation of living insects; accidental introduction of *Doryphora* 10-*lineata.*

709. [Walsh, B. D., and C. V. Riley.] Prophecy fulfilled. <Amer. Ent., August, 1869, v. 1, p. 244.

Spread of *Doryphora* 10-*lineata* through Michigan.

710. [Walsh, B. D., and C. V. Riley.] A poisonous worm. <Amer. Ent., August, 1869, v. 1, p. 245.

Extract from exchange; larva of *Protoparce celeus* not poisonous.

711. [Walsh, B. D., and C. V. Riley.] Wheat midge, alias milk weevil, alias red weevil. <Amer. Ent., August, 1869, v. 1, p. 245.

Answer to inquiry of C. Corbit; characters of larva of *Cecidomyia* [= *Diplosis*] *tritici*; change in heads of wheat.

712. [Walsh, B. D., and C. V. Riley.] Large fish-fly. <Amer. Ent., August, 1869, v. 1, p. 245.

Answer to inquiry of A. R. McCutchen; characters of *Chauliodes pectinicornis*; habits of the larva of *C. rastricornis.*

713. [WALSH, B. D., and C. V. RILEY.] Cottonwood leaf-galls. <Amer. Ent., August, 1869, v. 1, p. 245.

Answer to inquiry of J. B. Taylor; habits of *Pemphigus populicaulis*; characters of its gall.

714. [WALSH, B. D., and C. V. RILEY.] Insects named. <Amer. Ent., August, 1869, v. 1, p. 245.

Answer to inquiry of J. G. Goodrich; characters of *Saperda bivittata* [= *candida*].

715. [WALSH, B. D., and C. V. RILEY.] Four-lined leaf-bug on currant. <Amer. Ent., August, 1869, v. 1, p. 246.

Answer to inquiry of M. B. Bateman; characters, habits, and means against *Capsus 4-vittatus* [= *Pœcilocapsus lineatus*].

716. [WALSH, B. D., and C. V. RILEY.] Bee moth. <Amer. Ent., August, 1869, v. 1, p. 246, fig. 182.

Answer to inquiry of S. Blanchard; ravages and means against *Galleria cereana*; figures larva, pupa, cocoon, and imago of the same.

717. [WALSH, B. D., and C. V. RILEY.] Canker-worm parasites. <Amer. Ent., August, 1869, v. 1, p. 246.

Answer to inquiry of J. Petit; mention of *Microgaster* sp., parasitic on *Anisopteryx.*

718. [WALSH, B. D., and C. V. RILEY.] Beetles swarming about the lawn. <Amer. Ent., August, 1869, v. 1, p. 246.

Answer to inqury of S. Thompson; characters of *Gymnetis* [=*Allorhina*] *nitida*; habits of its larva.

719. [WALSH, B. D., and C. V. RILEY.] Tiger-beetle larva. <Amer. Ent., August, 1869, v. 1, p. 246.

Answer to inquiry of R. J. Dodge; characters and habits of larva of *Cicindelidæ.*

720. [WALSH, B. D., and C. V. RILEY.] Large compound gall on grapevine. <Amer. Ent., August, 1869, v. 1, p. 247, fig. 183.

Answer to inquiries of A. S. Fuller and D. W. Kauffman; characters and figure of gall of *Lasioptera vitis*; habits of its larva; enemy and parasite of the same.

721. [WALSH, B. D., and C. V. RILEY.] Insects named. <Amer. Ent., August, 1869, v. 1, p. 247.

Answer to inquiry of M. Treat; habits of larva of *Temnochila* [= *Trogosita*] *virescens*, of *Aplodes* [= *Synchlora*] *rubivora*, and of *Calosoma calidum.*

722. [WALSH, B. D., and C. V. RILEY.] Destructive larvæ. <Amer. Ent., August, 1869, v. 1, p. 247.

Answer to inquiry of B. F. Lee; ravages of an undetermined larva; parasites of *Saturnia* [= *Hemileuca*] *maia.*

723. [WALSH, B. D., and C. V. RILEY.] Eggs of tree-cricket on grapevine. <Amer. Ent., August, 1869, v. 1, p. 247.

Answer to inquiry of B. F. Lee; characters of eggs of *Œcanthus niveus*; carnivorous habits of the larva of the same.

724. [WALSH, B. D., and C. V. RILEY.] Grape-vine leaf-gall. <Amer. Ent., August, 1869, v. 1, p. 248, fig. 184.

Answer to inquiry of A. A. Hilliard; characters and figure of the leaf-galls of *Phylloxera vitifoliæ* [=*vastatrix*]; its enemies and means against them; varieties of grape infested; identity of the leaf- and root-galls; criticism of the new genera and families of H. Shimer.

725. [WALSH, B. D., and C. V. RILEY.] Grape-vine insects. <Amer. Ent., August, 1869, v. 1, p. 248.

Answer to inquiry of G. Pauls; characters of *Pelidnota punctata*; its larval habits; characters, habits, and food-plants of *Enchophyllum* [=*Enchenopa*] *binotata*.

726. [WALSH, B. D., and C. V. RILEY.] Museum pests. <Amer. Ent., August, 1869, v. 1, p. 248.

Answer to inquiry of C. P. Faulkner; ravages of *Dermestes lardarius*.

727. [WALSH, B. D., and C. V. RILEY.] Wheat maggots. <Amer. Ent., August, 1869, v. 1, p. 248.

Answer to inquiry of S. K. Faulkner; characters of larva of *Meromyza americana* injurious to heads of wheat.

728. [WALSH, B. D., and C. V. RILEY.] Parasites on "hateful grasshopper." <Amer. Ent., August, 1869, v. 1, p. 249.

Answer to inquiry of S. K. Faulkner; characters and habits of *Astoma* [=*Trombidium*] *locustarum*.

729. [WALSH, B. D., and C. V. RILEY.] Crippled moths. <Amer. Ent., August, 1869, v. 1, p. 248.

Answer to inquiry of C. P. Faulkner; conditions needed to enable moths to expand their wings; means by which insects walk on smooth surfaces.

730. [WALSH, B. D., and C. V. RILEY.] Insects on the oleander. <Amer. Ent., August, 1869, v. 1, p. 249, fig. 185.

Answer to inquiry of T. W. Gordon; means against undetermined Coccid on oleander; habits and figure of *Chilocorus bivulnerus*.

731. [WALSH, B. D., and C. V. RILEY.] Insects found on apple-trees. <Amer. Ent., August, 1869, v. 1, p. 249.

Answer to inquiry of J. W. Waters; identification of the eggs of *Reduvius raptatorius* [=*Sinea diadema*]; habits of *Chilocorus bivulnerus*.

732. [WALSH, B. D., and C. V. RILEY.] Beetles named. <Amer. Ent., August, 1869, v. 1, p. 249.

Answer to inquiry of J. M. Shaffer; *Lytta atrata* [=*Epicauta pennsylvanica*] caught on rag-weed.

733. [WALSH, B. D., and C. V. RILEY.] Gigantic water-bug. <Amer. Ent., August, 1869, v. 1, p. 249, fig. 186.

Answer to inquiry of E. M. Downing; habits and figure of *Belostoma grandis* [=*americanum*].

734. [WALSH, B. D., and C. V. RILEY.] Worm eating into green tomatoes. <Amer. Ent., August, 1869, v. 1, p. 249.

Answer to inquiry of D. L. Hall; food-habits of *Gortyna nitela*.

735. [Walsh, B. D., and C. V. Riley.] Miscellaneous. <Amer. Ent., August, 1869, v. 1, p. 249.

Answer to inquiry of G. W. Copley; food-habits of *Chrysochus auratus*, *Hemileuca maia*, and *Aphis* [=*Myzus*] *ribis*; habits of *Lozotœnia* [= *Cacœcia*] *rosaceana*.

736. [Walsh, B. D., and C. V. Riley.] Insects named. <Amer. Ent., August, 1869, v. 1, p. 250.

Answer to inquiry of H. A. Munger; food-habits of *Cassida pallida* [= *Coptocycla aurichalcea*], *Lytta murina* [=*Macrobasis unicolor*], and of the larvæ of the species of *Prionus*.

737. [Walsh, B. D., and C. V. Riley.] Lightning-hoppers. <Amer. Ent., August, 1869, v. 1, p. 250.

Answer to inquiry of T. W. Gordon; characters and habits of *Pœciloptera pruinosa*; vernacular names of *Fulgoridæ*, *Membracidæ*, and *Jassidæ*.

738. [Walsh, B. D., and C. V. Riley.] Bag-worms. <Amer. Ent., August, 1869, v. 1, p. 250.

Answer to inquiries of T. W. Gordon and S. Thompson; food-habits of *Thyridopteryx ephemeræformis*.

739. [Walsh, B. D., and C. V. Riley.] Woolly gall on white oak. <Amer. Ent., August, 1869, v. 1, p. 250, fig. 187.

Answer to inquiry of A. S. Fuller; characters and figure of the gall of *Cynips* [=*Andricus*] *seminator*.

740. [Walsh, B. D., and C. V. Riley.] Cabbage pests. <Amer. Ent., August, 1869, v. 1, p. 250.

Answer to inquiry of J. A. Williams; characters and habits of an undetermined elaterid larva; means against the larvæ of *Elateridæ*.

741. [Walsh, B. D., and C. V. Riley.] Bugs gathering on pear shoots. <Amer. Ent., August, 1869, v. 1, p. 250.

Answer to inquiry of E. J. Ayres: characters and habits of *Corimelæna pulicaria*.

742. [Walsh, B. D., and C. V. Riley.] Potato-bug. <Amer. Ent., August, 1869, v. 1, p. 250.

Answer to inquiry of J. B. Cartwell; food-habits of *Cassida* [= *Coptocycla*] *clavata*.

743. [Walsh, B. D., and C. V. Riley.] Insects named. <Amer. Ent., August, 1869, v. 1, p. 251.

Answer to inquiry of H. T. Birch; *Trochilium* [=*Ægeria*] *acerni* bred from maple.

744. [Walsh, B. D., and C. V. Riley.] Apple-tree worms. <Amer. Ent., August, 1869, v. 1, p. 251.

Answer to inquiry of C. Waters; abundance of undetermined moth (*Corycia vestaliata?*); larva of the same on apple-trees.

745. [Walsh, B. D., and C. V. Riley.] Oak-fig gall. <Amer. Ent., August, 1869, v. 1, p. 251.

Answer to inquiry of A. Fendler; characters of the gall of *Cynips* [=*Biorhiza*] *forticornis* and of a guest-fly, *Ceroptres ficus*, inhabiting the same.

746. [WALSH, B. D., and C. V. RILEY.] Insects named. <Amer. Ent., August, 1869, v. 1, p. 251.

Answer to inquiry of D. L. Phares; irregular appearance of *Cicada tredecim* [=*Tibicen septendecim*]; food-habits of *Oncideres cingulata.*

747. [WALSH, B. D., and C. V. RILEY.] Small apple-leaf worms. <Amer. Ent., August, 1869, v. 1, p. 251.

Answer to inquiry of H. Compton; means against *Spilonota oculana* [=*Tmetocera ocellana*].

748. [WALSH, B. D., and C. V. RILEY.] Rose-bug on apples. <Amer. Ent., August, 1869, v. 1, p. 251.

Answer to inqnuiry of A. Dean; food-plants and means against *Macrodactylus subspinosus.*

749. [WALSH, B. D., and C. V. RILEY.] Unicorn apple-tree caterpillar. <Amer. Ent., August, 1869, v. 1, p. 251.

Answer to inquiry of G. C. Brodhead; characters of the larva and imago of *Notodonta* [=*Cœlodasys*] *unicornis*; food-plants of the larva of the same.

750. [WALSH, B. D., and C. V. RILEY.] Large water beetle. <Amer. Ent., August, 1869, v. 1, p. 251.

Answer to inquiry of S. E. Mumford; characters of *Cybister fimbriolatus.* See No. 816.

751. [WALSH, B. D., and C. V. RILEY.] Beetles around peach-trees. <Amer. Ent., August, 1869, v. 1, p. 252.

Answer to inquiry of E. Hollister, jr.; characters and habits of *Helops pullus* [=*æreus*].

752. [WALSH, B. D., and C. V. RILEY.] A quick traveler. <Amer. Ent., August, 1869, v. 1, p. 252.

Answer to inquiry of G. C. Brodhead; characters and harmlessness of *Cermatia forceps.*

753. [WALSH, B. D., and C. V. RILEY.] Unknown moth. <Amer. Ent., August, 1869, v. 1, p. 252.

Answer to inquiry of W. G. Barton; distribution of *Junonia lavinia* in Illinois.

754. [WALSH, B. D., and C. V. RILEY.] Corn-borer. <Amer. Ent., August, 1869, v. 1, p. 252.

Answer to inquiry of F. M. N.; identification of the larva of *Gortyna nitela* injurious to corn.

755. [WALSH, B. D., and C. V. RILEY.] Horns of stag-beetle. <Amer. Ent., August, 1869, v. 1, p. 252.

Answer to inquiry of C. R. Edwards; larval habits of *Lucanus elaphus.*

756. [WALSH, B. D., and C. V. RILEY.] Imported gooseberry worms. <Amer. Ent., August, 1869, v. 1, p. 252.

Answer to inquiry of C. P. Faulkuer; means against *Nematus ribesii.*

757. [WALSH, B. D., and C. V. RILEY.] Worm on bark of walnut-tree. <Amer. Ent., August, 1869, v. 1, p. 252.

Answer to inquiry of F. S. Fuller; undetermined notodontoid larva on the bark of walnut.

758. [WALSH, B. D., and C. V. RILEY.] Rotten root. <Amer. Ent., August, 1869, v. 1, p. 252.

Answer to inquiry of J. M. Beecher; scavenger habits of undetermined larva feeding on dead roots of apple-trees.

759. [WALSH, B. D., and C. V. RILEY.] Large dragon-fly. <Amer. Ent., August, 1869, v. 1, p. 252.

Answer to inquiry of G. S. Grover; characters and usefulness of *Æschna constricta.*

760. [WALSH, B. D., and C. V. RILEY.] Stinging larvæ. <Amer. Ent., August, 1869, v. 1, p. 252.

Answer to inquiry of E. H. King; characters and urticating properties of *Saturnia* [=*Hemileuca*] *maia*; peach-blow potatoes avoided by *Doryphora* 10-*lineata.*

761. [WALSH, B. D., and C. V. RILEY.] Raspberry worms. <Amer. Ent., August, 1869, v. 1, p. 252.

Answer to inquiry of E. H. Beebe; characters of larva of *Selandria* [=*Monophadnus*] *rubi.*

762. [WALSH, B. D., and C. V. RILEY.] Leaf-galls and caterpillars on the sugarberry. <Amer. Ent., August, 1869, v. 1, p. 252.

Answer to inquiry of S. L. Scofield; undetermined gall on leaves of *Celtis occidentalis*; *Orgyia leucostigma* feeding on the leaves of the same.

763. [WALSH, B. D., and C. V. RILEY.] Dark grape-worm. <Amer. Ent., August, 1869, v. 1, p. 252.

Answer to inquiry of T. W. G.; characters and food-plants of *Thyreus abbotii.*

764. [WALSH, B. D., and C. V. RILEY.] Too fond of honey. <Amer. Ent., August, 1869, v. 1, p. 252.

Answer to inquiry of T. W. Gordon; *Cermatia forceps* found in a jar of honey.

765. [WALSH, B. D., and C. V. RILEY.] Caterpillar of polyphemus moth. <Amer. Ent., August, 1869, v. 1, p. 252.

Answer to inquiry of A. De Wyl; larva of *Telea polyphemus* feeding on plums.

766. [WALSH, B. D., and C. V. RILEY.] Why noxious insects increase upon us. <Amer. Ent., September–October, 1869, v. 2, pp. 1–2.

Reasons why noxious insects increase; review of articles by E. S. Hull, H. W. Beecher, and Puritan.

767. [WALSH, B. D., and C. V. RILEY.] Tortoise-beetles. <Amer. Ent., September–October, 1869, v. 2, pp. 2–5, figs. 1–3.

Resemblances of insects to other animals or to their surroundings; distribution, food-plants, and figure of *Deloyala* [= *Coptocycla*] *clavata*; description and figure of *Physonota quinque-punctata* n. sp. [=*unipunctata*]; figure of the larva of the same; correspondence of structural differences in larvæ with those in imagos of *Cassididæ*, and with differences in food-plants; list of insects injurious to *Solanum*; figure of pupa and imago of *Chelymorpha cribraria* [= *argus*].

768. [WALSH, B. D., and C. V. RILEY.] Scientific nomenclature. <Amer. Ent., September–October, 1869, v. 2, pp. 5–8.

Rules observed in giving specific names to animals and plants; the law of priority; nature and extent of generic subdivisions.

769. [WALSH, B. D., and C. V. RILEY.] Killing apple-worms by machinery. <Amer. Ent., September–October, 1869, v. 2, p. 9.

Extract from article of L. P. Haskell, with comment; use of rags in place of hay-bands as traps for *Carpocapsa pomonella*; destruction of the insects caught by means of a clothes-wringer.

770. [WALSH, B. D., and C. V. RILEY.] A potter wasp (*Odynerus flavipes?* Fabr.). <Amer. Ent., September–October, 1869, v. 2, p. 10, fig. 4.

Method employed by *Eumenidæ* to provision their nests; construction of the same by species of *Odynerus*; habits of *O. flavipes* in provisioning a nest with several species of larvæ; figure of the imago of the same and of the nest of a species of *Odynerus*; structure of wings and habits of *Vespidæ*, *Eumenidæ*, and fossorial wasps.

771. [WALSH, B. D., and C. V. RILEY.] Tomato-worms not poisonous. <Amer. Ent., September–October, 1869, v. 2, p. 11.

Prejudices in regard to certain animals; presence of the horn on the larvæ of almost all *Sphingidæ*; larva of *Protoparce celeus* not poisonous.

772. [WALSH, B. D., and C. V. RILEY.] Gooseberry and currant worms. <Amer. Ent., September–October, 1869, v. 2, pp. 12–22, figs. 5–11.

Need of precision in nomenclature; relations and distribution of the North American species of *Ribes*; insect enemies of the same; natural history and description of *Ellopia* [=*Eufitchia*] *ribearia*, *Nematus ventricosus* [=*ribesii*], and *Pristiphora grossulariæ*; figures larvæ and imagos of the three species and the pupa of the *Eufitchia*.

773. [WALSH, B. D., and C. V. RILEY.] Striped cucumber beetle. <Amer. Ent., September–October, 1869, v. 2, p. 24, figs. 17–19.

Answer to inquiry of M. M. Gray; description of larva, and habits, ravages of and means against the larva and imago of *Diabrotica vittata*; figures larva, pupa, and imago of the same.

774. [WALSH, B. D., and C. V. RILEY.] Leafy oak-gall. <Amer. Ent., September–October, 1869, v. 2, p. 25, fig. 20.

Answer to inquiry of B. H. B.; description and figure of the gall of *Cynips q.-frondosa*.

775. [WALSH, B. D., and C. V. RILEY.] Drop of gold. <Amer. Ent., September–October, 1869, v. 2, p. 25.

Answer to inquiry of B. H. B.; egg of *Citheronia regalis?* on shellbark-hickory; characters of eggs and oviposition of *Metapodius nasulus* [=*femoratus*].

776. [WALSH, B. D., and C. V. RILEY.] The luna moth. <Amer. Ent., September–October, 1869, v. 2, p. 25.

Answer to inquiry of G. W. Kinney; characters of *Attacus* [=*Actias*] *luna*; food-plants of the larva of the same.

777. [WALSH, B. D., and C. V. RILEY.] Hag-moth larva. <Amer. Ent., September–October, 1869, v. 2, p. 25, fig. 21.

Answer to inquiries of C. T. Farrell and M. B. Baldwin; characters of cocoon and imago of *Limacodes* [=*Phobetron*] *pithecium*; number of broods of the moth in the year; figure of the larva; occurrence of *Harpactor* [= *Milyas*] *cinctus* in Illinois.

778. [Walsh, B. D., and C. V. Riley.] Stinging bug. <Amer. Ent., September–October, 1869, v. 2, p. 25.

Answer to inquiry of J. M. Shaffer; habits and characters of *Phymata erosa.*

779. [Walsh, B. D., and C. V. Riley.] Pear-tree worms. <Amer. Ent., September–October, 1869, v. 2, p. 25.

Answer to inquiry of B. Hathaway; larva of *Notodonta* [=*Œdemasia*] *concinna* found on pear-tree leaves.

780. [Walsh, B. D., and C. V. Riley.] "Dobson." <Amer. Ent., September–October, 1869, v. 2, p. 25.

Answer to inquiry of Fisherman; ignorance as to what the larva called "Dobson" is.

781. [Walsh, B. D., and C. V. Riley.] White-pine weevil. <Amer. Ent., September–October, 1869, v. 2, p. 26, fig. 22.

Answer to inquiry of A. S. Fuller; seasons, ravages, and means against *Pissodes strobi*; figures larva, pupa, and imago of the same.

782. [Walsh, B. D., and C. V. Riley.] Unnatural secretion of wax. <Amer. Ent., September–October, 1869, v. 2, p. 26.

Answer to inquiry of F. Brewer; description of a case of excessive secretion of wax by *Apis mellifica.*

783. [Walsh, B. D., and C. V. Riley.] Raspberry borer. <Amer. Ent., September–October, 1869, v. 2, p. 26.

Answer to inquiry of F. A. Gates; ravages of the larva of *Oberea perspicillata* [=*bimaculata*] in blackberry and raspberry bushes; characters of the imago of *Dryocampa senatoria*; food-plants of the larva of the same.

784. [Walsh, B. D., and C. V. Riley.] Cocoon of horn-bug. <Amer. Ent., September–October, 1869, v. 2, p. 26.

Answer to inquiry of A. R. McClutchen; characters of cocoon of *Lucanus dama?*

785. [Walsh, B. D., and C. V. Riley.] Insects named. <Amer. Ent., September–October, 1869, v. 2, p. 26, fig. 23.

Answer to inquiry of J. R. Muhleman; characters and figure of *Amphipyra* [=*Pyrophila*] *pyramidoides*; food-plants and larva of the same and of *A. pyramidea* of Europe; characters of the larva and imago of *Agnomonia anilis*; supposed food-plants of its larva.

786. [Walsh, B. D., and C. V. Riley.] Cecropia moth caterpillar. <Amer. Ent., September–October, 1869, v. 2, p. 26.

Answer to inquiries of H. G. Lewelling and S. H. I. Green; characters and food-plants of the larva of *Attacus cecropia.*

787. [Walsh, B. D., and C. V. Riley.] How cut-worms originate. <Amer. Ent., September–October, 1869, v. 2, p. 26.

Answer to inquiry of T. W. Gordon; cut-worms are larvæ produced from eggs of certain *Noctuidæ.*

788. [Walsh, B. D., and C. V. Riley.] Red-humped caterpillar. <Amer. Ent., September–October, 1869, v. 2, p. 27, figs. 24–26.

Answer to inquiry of D. W. Kauffman; habits, characters, food-plants, and means against larva of *Notodonta* [=*Œdemasia*] *concinna*; figures larva, pupa, and imago of the same; poisonousness of the fluids of certain insects.

789. [WALSH, B. D., and C. V. RILEY.] Insects named. <Amer. Ent., September–October, 1869, v. 2, p. 27.

Answer to inquiry of T. W. G[ordon]; characters and food-plants of *Thelia bimaculata* and of larva of *Procris* [=*Harrisina*] *americana* and *Eudamus tityrus*; characters of the imago of the last.

790. [WALSH, B. D., and C. V. RILEY.] Gilt gold-beetle. <Amer. Ent., September–October, 1869, v. 2, p. 27.

Answer to inquiry of W. H. Martin; characters and food-plants of *Chrysochus auratus.*

791. [WALSH, B. D., and C. V. RILEY.] The trumpet grape-gall. <Amer. Ent., September–October, 1869, v. 2, p. 28, fig. 27.

Answer to inquiry of D. McClaine; description and figure of galls of *Cecidomyia vitislituus* [=*viticola*]; occurrence of similar galls on several varieties of grape-vines and on leaves of hickory and hackberry.

792. [WALSH, B. D., and C. V. RILEY.] Grape-berry moth. <Amer. Ent., September–October, 1869, v. 2, p. 28.

Answer to inquiry of H. C. Barnard; ravages of *Penthina vitivorana* [=*Eudemis botrana*].

793. [WALSH, B. D., and C. V. RILEY.] Oak pruner. <Amer. Ent., September–October, 1869, v. 2, p. 28.

Answer to inquiry of T. J. Plumb; occurrence of *Elaphidion putator* [=*villosum*] at Madison, Wis.

794. [WALSH, B. D., and C. V. RILEY.] Potato-bugs. <Amer. Ent., September–October, 1869, v. 2, p. 28.

Answer to inquiry of W. R. Shelmire; ravages and food-plants of *Lytta* [=*Epicauta*] *vittata*; means against potato-eating *Meloidæ*; characters of an unknown lepidopterous larva boring in a potato-stalk; directions for packing insects.

795. [WALSH, B. D., and C. V. RILEY.] Blood-sucking cone-nose. <Amer. Ent., September–October, 1869, v. 2, p. 28.

Answer to inquiry of G. W. C.; effect of the "bite" of *Conorhinus sanguisuga*; food-habits of the same.

796. [WALSH, B. D., and C. V. RILEY.] Woolly slug-like worm on apple. <Amer. Ent., September–October, 1869, v. 2, p. 29.

Answer to inquiry of H. A. Green; food-plants and characters of larva of *Lagoa opercularis*; characters of the imago of the same; improper method of packing living insects.

797. [WALSH, B. D., and C. V. RILEY.] A water-bug. <Amer. Ent., September–October, 1869, v. 2, p. 29.

Answer to inquiry of W. V. Smith; characters of *Ranatra fusca*; habits and habitat of *Nepidæ.*

798. [WALSH, B. D., and C. V. RILEY.] Goldenrod galls. <Amer. Ent., September–October, 1869, v. 2, p. 29.

Answer to inquiry of G. W. C.; characters of galls of *Trypeta solidaginis* and *Cecidomyia solidaginis.*

799. [WALSH, B. D., and C. V. RILEY.] Oak-leaf gall. <Amer. Ent., September–October, 1869, v. 2, p. 29.

Answer to inquiry of B. H. Broadnox; description of galls of *Cecidomyia quercus-pilulæ* and *C. q.-symmetrica*; *Cynipidæ* inquilinous in galls of *Cecidomyidæ*; differences between larvæ of *Cynipidæ* and *Cecidomyidæ*; transformations of *C. q.-pilulæ* and of the *Cynips* sp., inquilinous in its gall; distinction between groups of oaks.

800. [WALSH, B. D., and C. V. RILEY.] Humble bees. <Amer. Ent., September–October, 1869, v. 2, p. 30.

Answer to inquiry of C. S. Davis; number of species and distribution of the genus *Bombus* in North America; habits of and differences between the several forms composing a society of social insects; habits of *Bombus pennsylvanicus*, *Halictus* sp., and *Andrena* sp.

801. [WALSH, B. D., and C. V. RILEY.] Can land be insured against cut-worms and other insects? <Amer. Ent., September–October, 1869, v. 2, p. 30.

Answer to inquiry of A. Willis; means against larvæ of cut-worms.

802. [WALSH, B. D., and C. V. RILEY.] Beetles named. <Amer. Ent., September–October, 1869, v. 2, p. 30.

Answer to inquiry of T. W. Hoyt, jr.; characters of *Cassida* [= *Coptocycla*] *aurichalcea* and *Brachinus americanus*; effect of the discharge made by *Brachinus* sp. upon the inside of the human mouth.

803. [WALSH, B. D., and C. V. RILEY.] Royal horned-caterpillar. <Amer. Ent., September–October, 1869, v. 2, p. 30.

Answer to inquiries of W. C. Holmes and M. G. Kern; larva of *Citheronia regalis* found feeding on *Syringa*.

804. [WALSH, B. D., and C. V. RILEY.] Parsnip caterpillar. <Amer. Ent., September–October, 1869, v. 2, p. 30.

Answer to inquiry of T. W. Hoyt, jr.; characters of larva of *Papilio asterias*.

805. [WALSH, B. D., and C. V. RILEY.] Insects named. <Amer. Ent., September–October, 1869, v. 2, p. 31.

Answer to inquiry of C. P. Faulkner; identification of several beetles; habits of *Creophilus villosus*, *Listotrophus cingulatus*, *Scarites subterraneus*, and *Uloma impressa*.

806. [WALSH, B. D., and C. V. RILEY.] Beetle named. <Amer. Ent., September–October, 1869, v. 2, p. 31.

Answer to inquiry of W. Keyes; habits and characters of larva of *Calopteron terminale*; distinctness of *C. reticulatum* from *C. terminale*.

807. [WALSH, B. D., and C. V. RILEY.] Moth named. <Amer. Ent., September–October, 1869, v. 2, p. 31.

Answer to inquiry of W. G. Barton; food-plant of larva and characters of imago of *Alaria* [= *Rhodophora*] *florida*.

808. [WALSH, B. D., and C. V. RILEY.] Worm boring into cucumber. <Amer. Ent., September–October, 1869, v. 2, p. 31.

Answer to inquiries of G. W. C., O. L. Barler, and E. S. Smith; characters of larva and imago of *Phakellura* [= *Eudioptis*] *nitidalis*; food-plants of larva; characters of undetermined larva found boring in cucumbers.

809. [WALSH, B. D., and C. V. RILEY.] Caterpillar of the io moth. <Amer. Ent., September–October, 1869, v. 2, p. 31.
Answer to inquiry of Mrs. Tildesley; characters of larva and imago of *Saturnia* [= *Hyperchiria*] *io*; food-plant and urticating properties of the larva.

810. [WALSH, B. D., and C. V. RILEY.] Apple-tree worms. <Amer. Ent., September–October, 1869, v. 2, p. 32.
Answer to inquiry of H. K. Vickroy; habits and characters of larva of *Acrobasis* [=*Pempelia*] *hammondi*; habits of larva of *Phycita nebulo* [=*Acrobasis indiginella*].

811. [WALSH, B. D., and C. V. RILEY.] Stinging larvæ. <Amer. Ent., September–October, 1869, v. 2, p. 32.
Answer to inquiry of J. C. Falls; meaning of the vernacular and technical names of *Empretia stimulea*; urticating properties of lepidopterous larvæ.

812. [WALSH, B. D., and C. V. RILEY.] Lappet caterpillar on apple-tree. <Amer. Ent., September–October, 1869, v. 2, p. 32.
Answer to inquiry of W. Stark; characters of larva of *Gastropacha americana.*

813. [WALSH, B. D., and C. V. RILEY.] Spined spider. <Amer. Ent., September–October, 1869, v. 2, p. 32.
Answer to inquiries of G. W. Kinney and T. W. Gordon; characters and synonymy of *Epeira* [=*Acrosoma*] *spinea.*

814. [WALSH, B. D., and C. V. RILEY.] Dangerous looking. <Amer Ent., September–October, 1869, v. 2, p. 32.
Answer to inquiry of M. M. Kenzie; characters and sting of *Mutilla coccinea* [= *Sphærophthalma occidentalis*].

815. [WALSH, B. D., and C. V. RILEY.] Bag-worms again. <Amer. Ent., September–October, 1869, v. 2, p. 32.
Answer to inquiry of T. C. Tipton; ravages of *Thyridopteryx ephemeræformis*; harmlessness of larva of *Protoparce celeus*; habitat of larva of *Musca domestica.*

816. [WALSH, B. D., and C. V. RILEY.] Large water-beetle. <Amer. Ent., September–October, 1869, v. 2, p. 32.
Answer to inquiry of S. E. Munford; secondary sexual characters in elytra of *Cybister fimbriolatus.* See No. 750.

817. [WALSH, B. D., and C. V. RILEY.] Beetles under dead fish. <Amer. Ent., September–October, 1869, v. 2, p. 32.
Answer to inquiry of T. Ferrell; food-habits and characters of *Silpha peltata* [=*americana*].

818. [WALSH, B. D., and C. V. RILEY.] Universal remedies. <Amer. Ent., November, 1869, v. 2, pp. 33–35.
Worthlessness of any one substance as a means against insects.

819. [WALSH, B. D., and C. V. RILEY.] Tent-caterpillars and fall-web-worms. <Amer. Ent., November, 1869, v. 2, p. 39.
Critical review of article in Western Rural, August 26, 1869; seasons, habits, food-plants, and characters of *Clisiocampa americana* and *Hyphantria textor* [=*cunea*].

820. [WALSH, B. D., and C. V. RILEY.] The boll-worm or corn-worm. 2d article. (*Heliothis armigera*, Hübner.) <Amer. Ent., November, 1869, v. 2, pp. 42–44, fig. 29.

Seasons, food-plants, ravages of, and means against *Heliothis armigera*; figures of larvæ, pupa, cocoon, and imago of the same; food-plants of *Gortyna nitela*.

821. [WALSH, B. D., and C. V. RILEY.] Galls and their architects. 2d article. <Amer. Ent., 1869–1870, v. 2: November, pp. 45–50, figs. 30–32; December–January, pp. 70–74, figs. 45–47; February, pp. 103–106, figs. 68–71.

See No. 518; definition and classification of galls; descriptions and figures of galls and larvæ of *Nematus salicis-pomum*, *Euura s.-ovum*, and *E. s.-gemma* [=*orbitalis*]; habits, seasons, and descriptions of the same; habits and seasons of *Anthonomus sycophanta*, *Batrachedra salicipomonella*, and *Nematus mendicus*; differences between gall-makers and guest-flies; occurrence of distinct genera of gall-insects on plants of distinct genera; descriptions and figures of galls of *Cynips* [=*Andricus*] *quercus-seminator* and *C. q.-frondosa*; synoptic table of North American genera of *Cynipidæ Psenides*; description of *Antistrophus* n. g. and of *A. lygodesmiæ-pisum* n. sp. and its gall; description and figure of the larva and imago of *Agrilus ruficollis* and its gall; habits, food-plants of, and means against, the same; figure and description of *Baridius* [=*Ampeloglypter*] *sesostris* and its gall; habits, food-plants of, and means against, the same; characters of *Madarus ampelopsidos* [=*Ampeloglypter ater*] and its gall; habits of *Buprestidæ*.

822. [WALSH, B. D., and C. V. RILEY.] Toads in gardens. <Amer. Ent., November, 1869, v. 2, p. 50.

Value of toads as a means against noxious insects, etc., in gardens.

823. [WALSH, B. D., and C. V. RILEY.] Notes on the Tarantula-killer. <Amer. Ent., November, 1869, v. 2, p. 52.

Comments on note of C. Peabody; occurrence of *Mygale hentzii* and *Pepsis formosa* in Missouri.

824. [WALSH, B. D., and C. V. RILEY.] Swarms of lady-birds. <Amer. Ent., November, 1869, v. 2, p. 55.

Occurrence of countless millions of *Coccinellidæ* in England; their origin and movements.

825. [WALSH, B. D., and C. V. RILEY.] The squash-bug does not touch the white bush scollop. <Amer. Ent., November, 1869, v. 2, p. 55.

Coreus [=*Anasa*] *tristis* does not attack the white bush scollop variety of the squash-vine; means against the same.

826. [WALSH, B. D., and C. V. RILEY.] [Scientific names.] <Amer. Ent., November, 1869, v. 2, p. 57.

Use of English and scientific names of insects.

827. [WALSH, B. D., and C. V. RILEY.] On our table. <Amer. Ent., November, 1869, v. 2, pp. 57–58.

Notices of: Record of American entomology for the year 1868.—The Canadian entomologist.—The butterflies of North America, by W. H. Edwards.—Guide to the study of insects, by A. S. Packard, jr., etc.

828. [WALSH, B. D., and C. V. RILEY.] Locust borer. <Amer. Ent., November, 1869, v. 2, p. 58.

Answer to inquiry of J. Bagby; *Arhopalus* [= *Cyllene*] *robiniæ* ♀ undistinguishable from *A.* [= *C.*] *pictus* ♀.

829. [WALSH, B. D., and C. V. RILEY.] Saddle-back larva. <Amer. Ent., November, 1869, v. 2, p. 59, fig. 36.

Answer to inquiry of G. T. Cost; figure of the larva of *Empretia stimulea* found on Indian corn.

830. [WALSH, B. D., and C. V. RILEY.] Silk spiders. <Amer. Ent., November, 1869, v. 2, p. 59.

Answer to inquiries of G. Howe and C. W. Spaulding; characters of *Epeira* [= *Argiope*] *riparia* and *Nephila plumipes*.

831. [WALSH, B. D., and C. V. RILEY.] Entomological works. <Amer. Ent., November, 1869, v. 2, p. 59.

Answer to inquiry of S. W. Cowles; mention of works containing descriptions of North American Coleoptera and Lepidoptera; food-plants of the larva of *Eudryas unio*.

832. [WALSH, B. D., and C. V. RILEY.] Insects named. <Amer. Ent., November, 1869, v. 2, p. 59.

Answer to inquiry of A. H. R. Bryant; characters of the cocoon of *Attacus cecropia* and the imago of *Mutilla coccinea* [= *Sphærophthalma occidentalis*].

833. [WALSH, B. D., and C. V. RILEY.] A new bee enemy. <Amer. Ent., November, 1869, v. 2, p. 59.

Answer to inquiry of F. Brewer; characters of an undetermined carabid larva found eating *Apis mellifica*.

834. [WALSH, B. D., and C. V. RILEY.] Thousand-legged worms. <Amer. Ent., November, 1869, v. 2, p. 59.

Answer to inquiry of J. W. Merchant; characters and poisonousness of *Scolopendra castaneiceps*; *Julus* sp. and *Polydesmus* sp. injurious to strawberries.

835. [WALSH, B. D., and C. V. RILEY.] Cabbage-worms. <Amer. Ent., November, 1869, v. 2, p. 60, figs. 37–38.

Answer to inquiry of W. C. Holmes; figures larva, pupa, and imago of *Pieris protodice*; means against cabbage-worms.

836. [WALSH, B. D., and C. V. RILEY.] The rape butterfly. Amer. Ent., November, 1869, v. 2, p. 60.

Answer to inquiry of J. E. Chase; occurrence of *Pieris rapæ* in Bangor, Me.

837. [WALSH, B. D., and C. V. RILEY.] Bad packing. <Amer. Ent., November, 1869, v. 2, p. 60.

Answer to inquiry of H. C. Beardslee; characters and food-plants of *Empretia stimulea*; food-plant of *Darapsa* [= *Ampelophaga*] *myron*; directions for sending larvæ by mail.

838. [WALSH, B. D., and C. V. RILEY.] Granddaddy long-legs. <Amer. Ent., November, 1869, v. 2, p. 60.

Answer to inquiry of W. R. Howard; vernacular names and habits of *Phalangidæ*.

839. [WALSH, B. D., and C. V. RILEY.] Borer in apple-twig. <Amer. Ent., November, 1869, v. 2, p. 60.

Answer to inquiry of G. C. Brackett; habits of *Bostrichus* [= *Amphicerus*] *bicaudatus* and *Elaphidion parallelum* [= *villosum*].

840. [WALSH, B. D., and C. V. RILEY.] Grape-vine leaf-galls. <Amer. Ent., November, 1869, v. 2, p. 61.

Answer to inquiry of W. T. Heildrup; habits and means against *Phylloxera vastatrix*; varieties of grape infested by the same.

841. [WALSH, B. D., and C. V. RILEY.] Maple-worms. <Amer. Ent., November, 1869, v. 2, p. 61.

Answer to inquiry of H. K. Vickroy; characters and ravages of *Dryocampa rubicunda* and *Acronycta americana*; food-plants of *Telea polyphemus* and *Attacus cecropia*.

842. [WALSH, B. D., and C. V. RILEY.] Melancholy chafer in apples. <Amer. Ent., November, 1869, v. 2, p. 61, fig. 39.

Answer to inquiry of J. F. Fulton; figure of *Euryomia* [=*Euphoria*] *melancholica* found boring in apples.

843. [WALSH, B. D., and C. V. RILEY.] Worms boring in cucumbers. <Amer. Ent., November, 1869, v. 2, p. 61.

Answer to inquiry of W. B. Ramson; food-habits of *Phacellura* [= *Eudioptis*] *nitidalis*.

844. [WALSH, B. D., and C. V. RILEY.] Lilac-borer. <Amer. Ent., November, 1869, v. 2, p. 61.

Answer to inquiry of T. J. Freeman; characters, affinities, and means against *Ægeria* [= *Podosesia*] *syringæ*.

845. [WALSH, B. D., and C. V. RILEY.] Burying beetles. <Amer. Ent., November, 1869, v. 2, p. 61.

Answer to inquiry of J. H. Osborn; habits of *Necrophorus marginatus* and of *Silphidæ* generally; characters of *Hylobius stupidus* [= *Pachylobius picivorus*] found on plum-trees.

846. [WALSH, B. D., and C. V. RILEY.] Wire-worms in potatoes. <Amer. Ent., November, 1869, v. 2, p. 62.

Answer to inquiry of W. R. Shelmire; characters of larva (*Melanotus incertus?*) boring in potatoes; food-habits and means against larvæ of *Elateridæ*.

847. [WALSH, B. D., and C. V. RILEY.] Insects named. <Amer. Ent., November, 1869, v. 2, p. 62.

Answer to inquiry of J. F. Waters; unknown tortricid and *Limacodes* sp., found on apple-tree; characters of *Chariesterus antennator*.

848. [WALSH, B. D., and C. V. RILEY.] Girdled pear twigs. <Amer. Ent., November, 1869, v. 2, p. 62.

Answer to inquiry of T. A. Thorp; pear twigs girdled by *Oncideres cingulata*.

849. [WALSH, B. D., and C. V. RILEY.] Insects named. <Amer. Ent., November, 1869, v. 2, p. 62.

Answer to inquiry of E. T. Dale; food-habits of *Hippodamia glacialis*, *Strachia* [=*Murgantia*] *histrionica* and *Blepharida rhois*; figure of *Hippodamia glacialis*.

850. [WALSH, B. D., and C. V. RILEY.] Tomato-feeding worm. <Amer. Ent., November, 1869, v. 2, p. 62, fig. 41.

Answer to inquiry of A. C. Davis; description, seasons, and food-plants of larva of *Prodenia commelinæ*; figure of dorsal surface of a segment of the same.

851. [WALSH, B. D., and C. V. RILEY.] Cocoons of Ichneumon flies. <Amer. Ent., November, 1869, v. 2, p. 62.

Answer to inquiry of C. Mitchell; cocoons of *Microgaster* sp. found on larva of *Protoparce celeus.*

852. [WALSH, B. D., and C. V. RILEY.] Gall on spotted touch-me-not. <Amer. Ent., November, 1869, v. 2, p. 63, fig. 42.

Answer to inquiry of A. N. Prentiss; description and figures of the gall of *Cecidomyia impatientis* found on *Impatiens fulva.*

853. [WALSH, B. D., and C. V. RILEY.] Unknown larvæ. <Amer. Ent., November, 1869, v. 2, p. 63.

Answer to inquiry of J. M. Harold; characters of unknown larva allied to *Lagoa.*

854. [WALSH, B. D., and C. V. RILEY.] Blood-sucking cone-nose. <Amer. Ent., November, 1869, v. 2, p. 63.

Answer to inquiry of D. B. Watson; occurrence of *Conorhinus sanguisugus* at Saint Louis, Mo.

855. [WALSH, B. D., and C. V. RILEY.] Eggs on a grape-cane. <Amer. Ent., November, 1869, v. 2, p. 63.

Answer to inquiry of J. Cochrane; difficulty of identifying eggs of insects.

856. [WALSH, B. D., and C. V. RILEY.] Gregarious willow-worms. <Amer. Ent., November, 1869, v. 2, p. 63.

Answer to inquiry of G. C. Brackett; characters, habits, and food-plants of the larva of *Clostera americana* [=*Ichthyura inclusa*].

857. [WALSH, B. D., and C. V. RILEY.] Caterpillars named. <Amer. Ent., November, 1869, v. 2, p. 63.

Answer to inquiries of G. W. Copley and W. D. Butler; food-habits of larvæ of *Eudamus tityrus* and *Papilio troilus.*

858. [WALSH, B. D., and C. V. RILEY.] Insects named. <Amer. Ent., November, 1869, v. 2, p. 63.

Answer to inquiry of L. G. Saffer; vernacular name of *Mutilla coccinea* [= *Sphærophthalma occidentalis*]; characters of *Stizus* [= *Sphecius*] *speciosus.*

859. [WALSH, B. D., and C. V. RILEY.] Range of the rear-horse. <Amer. Ent., November, 1869, v. 2, p. 63.

Answer to inquiry of V. T. Chambers; northern range of *Mantis* [= *Phasmomantis*] *carolina.*

860. [WALSH, B. D., and C. V. RILEY.] Royal horned-caterpillar. <Amer. Ent., November, 1869, v. 2, p. 64.

Answer to inquiry of D. L. Phares; *Citheronia regalis* more abundant in the South than in the North.

861. [WALSH, B. D., and C. V. RILEY.] Hair-worm or hair-snake. <Amer. Ent., November, 1869, v. 2, p. 64.

Answer to inquiry of E. H. King; *Gordius* sp. parasitic in the pupa of *Orchelimum* sp.

862. [WALSH, B. D., and C. V. RILEY.] Dahlia-stalk borer. <Amer. Ent., November, 1869, v. 2, p. 64.

Answer to inquiry of G. C. Broadhead; larva of *Gortyna nitela* boring in stalk of dahlia.

863. [WALSH, B. D., and C. V. RILEY.] Parsnip worm. <Amer. Ent., November, 1869, v. 2, p. 64.

Answer to inquiry of J. Adams; larva of *Papilio asterias* feeds on parsnip.

U. S. DEPARTMENT OF AGRICULTURE.
DIVISION OF ENTOMOLOGY.

BIBLIOGRAPHY

OF

THE MORE IMPORTANT CONTRIBUTIONS

TO

AMERICAN ECONOMIC ENTOMOLOGY.

PREPARED, BY AUTHORITY OF THE SECRETARY OF AGRICULTURE,

BY

SAMUEL HENSHAW.

PART III.

THE MORE IMPORTANT WRITINGS

OF

CHARLES VALENTINE RILEY.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1889.

BIBLIOGRAPHY OF THE MORE IMPORTANT CONTRIBUTIONS TO AMERICAN ECONOMIC ENTOMOLOGY.

PART III.

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    Stomoxys calcitrans distinguished from *Musca domestica*; habits of each; transformations of the latter; habit of larvæ of collecting underneath boards.

865. R[ILEY], C. [V.] The May-beetle. <Prairie Farmer, 6 June, 1863, [v. 27], n. s., v. 11, p. 356. S.-b. No. 1, p. 7.

    Ravages of *Phyllophaga quercina* [= *Lachnosterna fusca*]; description and habits of larvæ and imagos; remedies.

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    Description of imagos and larvæ of *Coreus* [= *Anasa*] *tristis*; habits, seasons, remedies.

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Rogas n. sp. parasitic on larva of *Sesia pelasgus ?* [=*Hemaris thysbe*]; economic benefits of parasitism.

880. [Riley, C. V.] Singular caterpillar. <Prairie Farmer, 22 July, 1865, [v. 32], n. s., v. 16, p. 50. S.-b. No. 1, p. 35.

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Occurrence and ravages of *Caloptenus spretus* in portions of Kansas and western United States in 1866.

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Fungoid origin of black-knot [*Sphæria morbosa*]; larvæ of *Conotrachelus nenuphar* present in the swellings.

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933. [RILEY, C. V.] Tilden tomato and the tobacco-worm. <Prairie Farmer, 5 January, 1867, [v. 35], n. s., v. 19, p. 5.
Remarks on communication of T. B.; tomato plants eaten by tobacco-worms [*Protoparce carolina*] in preference to tobacco plants; possibly the worms observed were tomato-worms [*P. celeus*].

934. [RILEY, C. V.] Remarks on *Saperda*, *Chrysobothris*, *Carpocapsa*, and *Conotrachelus*. <Prairie Farmer, 12 January, 1867, [v. 35], n. s., v. 19, p. 23.
Report of remarks made at the annual meeting of Southern Illinois Fruit Growers' Association.

935. [RILEY, C. V.] Bark-lice. <Prairie Farmer, 12 January, 1867, [v. 35], n. s., v. 19, p. 24.
Washing apple-trees with lye effective against bark-lice.

936. RILEY, C. V. Insects in the flower garden. A troublous time. <Prairie Farmer, 19 January, 1867, [v. 35], n. s., v. 19, p. 37. S.-b. No. 2, p. 45.
Answer to communication by Kate Sherman; describes larva of [*Heliothis phlogophagus*] injuring *Phlox.*

937. [RILEY, C. V.] Salt and vinegar for insects. <Prairie Farmer, 19 January, 1867, [v. 35], n. s., v. 19, p. 37. S.-b. No. 2, p. 45.
Review of T. Glover's Report of the U. S. Entomologist for 1865, T. Glover's Entomological exhibition in Paris, and W. C. Lodge's Fruits and fruit trees of the Middle States; use of salt and vinegar as means against insects; criticism of errors. See Nos. 222, 939, 942.

938. RILEY, C. V. Hickory bark borer, *Scolytus caryæ*, n. sp. <Prairie Farmer, 2 February, 1867, [v. 35], n. s., v. 19, pp. 68, 69, 6 figs. S.-b. No. 2, p. 50.

Descriptions and figures of larva and imago of *Scolytus caryæ* n. sp. [=4-*spinosus*] and of its borings in bark and wood of *Carya*; habits and ravages; figure of the pupa of *S. destructor* of Europe.

939. [RILEY, C. V.] Correction. <Prairie Farmer, 2 February, 1867, [v. 35], n. s., v. 19, p. 69. S.-b. No. 2, p. 50.

Correction of statement made in No. 937; T. Glover not responsible for calling *Saperda bivittata* [=*candida*] a butterfly. See Nos. 222, 937, 942.

940. RILEY, C. V. Dahlia and aster stalk-borer, *Gortyna nitela* Guenée. <Prairie Farmer, 23 February, 1867, [v. 35], n. s., v. 19, p. 116, 2 figs. S.-b. No. 2, p. 58.

Description of larva, pupa, and imago of *Gortyna nitela*; habits of and means against this insect.

941. R[ILEY], C. V. Borers and canker-worms. <Prairie Farmer, 9 March, 1867, [v. 35], n. s., v. 19, p. 151. S. b. No. 2, p. 61.

Critical review of E. H. C.'s "Remedy for the borer" and of J. Huggins' "Canker-worm;" indefiniteness of the word borer; borers confined to particular trees according to species; relations between *Clytus* [=*Cyllene*] *pictus* and *C.* [=*C.*] *robiniæ*; habits of and means against canker-worms. See No. 954.

942. [RILEY, C. V.] The critic criticised. <Prairie Farmer, 16 March, 1867, [v. 35], n. s., v. 19, p. 169. S.-b. No. 2, p. 58.

Reply to B. D. Walsh's "The critic criticised;" insists upon the correctness of one criticism made; acknowledges incorrectness of another. See Nos. 222, 937, 939.

943. RILEY, C. V. [*Solenobia.*] <Prairie Farmer, 16 March, 1867, [v. 35], n. s., v. 19, p. 169. S.-b. No. 2, p. 58.

Answer to inquiry of J. C. Plumb; brief description of the larva of *? Solenobia*; habits of the genus.

944. RILEY, C. V. Bark-lice. Their history, together with sundry remedies. <Prairie Farmer, 23 March, 1867, [v. 35], n. s., v. 19, p. 184. S.-b. No. 2, pp. 61–62. Extract: <Cultivator and Country Gentleman, 23 May, 1867, v. 29, p. 334. <Pract. Ent., April, 1867, v. 2, pp. 81–82.

Criticises several patent remedies for ravages of bark-lice, *Coccidæ*; ignorance of entomology amongst intelligent writers; natural history of *Mytilaspis pomicorticis* [=*pomorum*].

945. RILEY, C. V. The phlox-worm. <Prairie Farmer, 6 April, 1867, [v. 35], n. s., v. 19, p. 219, 2 figs. S.-b. No. 2, pp. 63, 64.

Describes and figures larva and imago of *Heliothis phloxiphaga*; describes pupa; seasons and habits.

946. RILEY, C. V. The potato-beetle. <Prairie Farmer, 6 April, 1867, [v. 35], n. s., v. 19, p. 219. S.-b. No. 2, p. 64.

Answer to inquiries of H. Tilden; *Doryphora decemlineata* remains permanently in regions invaded by it; hibernates as an imago under ground.

947. RILEY, C. V. Meadow-worms. <Prairie Farmer, 6 April, 1867, [v. 35], n. s., v. 19, p. 219. S.-b. No. 2, p. 64.

Answer to inquiry of B. S.; habits of *Tipula* in all stages.

948. RILEY, C. V. Clover-worms. <Prairie Farmer, 1867, [v. 35], n. s., v. 19, 20 April, pp. 260–261, 10 figs.; 27 April, p. 279. S.-b. No. 2, pp. 67, 68.

Habits and ravages of *Pyralis olinalis* [=*Asopia costalis*]; figures and detailed descriptions of larva, pupa, cocoon, and imago.

949. RILEY, C. V. The apple-leaf crumpler. <Prairie Farmer, 27 April, 1867, [v. 35], n. s., v. 19, p. 279, 4 figs. S.-b. No. 2, p. 68.

Answer to inquiry of A. H.; description of pupa, figure of larva-case and imago of *Phycita nebulo* [=*Acrobasis indiginella*]; habits and means against the same.

950. RILEY, C. V. Cocoons on the flowering ash. <Prairie Farmer, 27 April, 1867, [v. 35], n. s., v. 19, p. 279. S.-b. No. 2, p. 68.

Answer to inquiry of A. B. Pierce; descriptions of larva, cocoon, and imago of *Attacus promethea*; food-plants of larva; method of emergence from cocoon.

951. RILEY, C. V. Scarred apple-trees. Prairie Farmer, 27 April, 1867, [v. 35], n. s., v. 19, p. 279. S.-b. No. 2, p. 68.

Answer to inquiry of P. M. Williamson; descriptions of the injuries to apple-trees caused by *Tettigonia* sp., *Coccus harrisii* [=*Chionaspis furfurus*], and *Mytilaspis pomicorticis* [=*pomorum*].

952. RILEY, C. V. Aphides. <Prairie Farmer, 18 May, 1867, [v. 35,], n. s., v. 19, p. 332. S.-b. No. 2, p. 73.

Answer to inquiry of J. Taylor; color and propagation of *Aphis mali*; means against the same.

953. RILEY, C. V. Tree-cricket. Prairie Farmer, 18 May, 1867, [v. 35], n. s., v. 19, p. 332. S.-b. No. 2, p. 73.

Answer to inquiry of A. N. Prentiss; habits of *Œcanthus niveus*.

954. RILEY, C. V. Note. <Prairie Farmer, 18 May, 1867, [v. 35], n. s., v. 19, p. 332. S.-b. No. 2, p. 73.

Correction of No. 941; criticism unfounded.

955. RILEY, C. V. The strawberry-worm, *Emphytus maculatus* Norton. <Prairie Farmer, 25 May, 1867, [v. 35], n. s., v. 19, p. 348, 9 figs. S.-b. No. 2, p. 72.

Descriptions and figures of all stages, geographical distribution, seasons, habits, and oviposition of and means against *Emphytus* [=*Harpiphorus*] *maculatus*.

956. RILEY, C. V. White-pine worm: *Lophyrus abbotii*. <Prairie Farmer, 25 May, 1867, [v. 35], n. s., v. 19, p. 348, 7 figs. S.-b. No. 2. p. 72.

Description of imago of *Lophyrus abbotii*; figures larva, pupa, cocoon, ♀ imago and ♂ and ♀ antennæ; habits and seasons of larvæ.

957. [RILEY, C. V.] Stag-beetle. <Prairie Farmer, 25 May, 1867, [v. 35], n. s., v. 19, p. 348. S.-b. No. 2, p. 72.

Answer to inquiry of S. Barrier; habits of *Lucanus elaphus*.

958. [RILEY, C. V.] The Curculio. <Prairie Farmer, 1 June, 1867, [v. 35], n. s., v. 19, p. 368. S.-b. No. 2, p. 73.

Successful results from the use of machines for destroying *Conotrachelus nenuphar*; this insect hibernates in the imago state.

959. RILEY, C. V. Fifteen-spotted lady-bird. <Prairie Farmer, 8 June, 1867, [v. 35], n. s., v. 19, p. 381.

Answer to inquiry of A. B. Knowlton; food, variable coloration of imago, and usefulness of *Mysia* [*Anatis*] 15-*punctata*.

960. RILEY, C. V. Cherry Aphis. <Prairie Farmer, 8 June, 1867, [v. 35], n. s., v. 19, p. 381.

Answer to inquiry of G. Lee; habits, ravages of and means against *Myzus cerasi*.

961. RILEY, C. V. Tree-cricket. <Prairie Farmer, 8 June, 1867, [v. 35], n. s., v. 19, p. 381.

Eggs of *Œcanthus niveus* deposited in raspberry canes cause the death of the wood above them.

962. RILEY, C. V. Apple-tree borer. <Prairie Farmer, 8 June, 1867, [v. 35], n. s., v. 19, p. 381.

Answer to inquiry of A. B. Campbell; commends D. B. Wier's remedy against the apple-tree borer; *Saperda bivittata* [=*candida*] goes through its transformations in two years, though commonly believed to require three years.

963. RILEY, C. V. Insects affecting apple-tree roots. <Prairie Farmer, 15 June, 1867, [v. 35], n. s., v. 19, p. 397. S.-b. No. 2, p. 100.

Letter from O. B. Galusha, with answer; descriptions of young and mature wingless individuals of the root-inhabiting form, *Pemphigus pyri*, of *Schizoneura lanigera*; habits, seasons, and reproduction of this form; its gall-making and means against it; description of larva of *Cecidomyia* species found with the lice; and of larva and imago of *Mycetophila persica* [n. sp.?]; seasons of the latter; larva of *Saperda calcarata* bores in roots of apple; larva of *Helops micans* feeds on decaying apples; *Julus* [*Spirobolus*] *marginatus* infested with *Gamasus juloides*.

964. RILEY, C. V. A chapter on cut-worms. <Prairie Farmer, 22 June, 1867, [v. 35], n. s., v. 19, pp. 413–414, 7 figs. S.-b. No. 2, pp. 79–80.

Extract from J. Townley's "Do cut-worms destroy tree buds?". Buds of fruit trees destroyed by the larvæ of *Agrotididæ*; other ravages and means against the same; descriptions of the larvæ of *Agrotis subgothica* [=*A. herilis* and *A. tricosa*], *A. telifera* [=*A. ypsilon*], and *Celæna* [=*Hadena*] *renigera*; description of *A. cochranis* n. sp. [=*A. messoria*]; figures larva and imago of *A. cochranis*, *A. telifera*, and *Celæna renigera*; and imago of *A. subgothica*; habits, seasons, and vernacular names of *Agrotididæ*.

965. [RILEY, C. V.] Strawberry-worm. <Prairie Farmer, 22 June, 1867, [v. 35], n. s., v. 19, p. 414. S.-b. No. 2, p. 80.

Answer to inquiry of A. R. Whitney; geographical distribution of *Emphytus* [=*Harpiphorus*] *maculatus*.

966. RILEY, C. V. Insects stripping the bur-oak. <Prairie Farmer, 13 July, 1867, [v. 36], n. s., v. 20, p. 21. S.-b. No. 2, p. 81.

Answer to inquiry of A. B. Price; habits of *Lachnosterna pilosicollis* [=*tristis*.]

967. RILEY, C. V. Borers. <Prairie Farmer, 13 July, 1867, [v. 36], n. s., v. 20, p. 21. S.-b. No. 2, p. 81.

Answer to inquiry of J. Wentworth; means against *Clytus* [= *Cyllene*] *robiniæ* and *Xyleutes* [= *Cossus*] *robiniæ*.

968. RILEY, C. V. Potato-beetle. <Prairie Farmer, 13 July, 1867, [v. 36], n. s., v. 20, p. 21. S.-b. No. 2, pp. 81–82.

Answer to inquiries of J. L. W. and G. L. Merriwether; *Doryphora 10-lineata* three-brooded; its occurrence at Shipman, Ill.

969. [RILEY, C. V.] Smith's patent Curculio trap. <Prairie Farmer, 13 July, 1867, [v. 36], n. s., v. 20, p. 21. S.-b. No. 2, p. 82.

Communication from N. C. Coffman, with reply; condemns J. Smith's Curculio trap.

970. RILEY, C. V. [*Aphis ribis.*] <Prairie Farmer, 3 August, 1867, [v. 36], n. s., v. 20, p. 69. S.-b. No. 2, p. 81.

Answer to inquiry of C. J. Eckhart; means against *Myzus ribis.*

971. RILEY, C. V. *Mantis carolina.* <Prairie Farmer, 3 August, 1867, [v. 36], n. s., v. 20, p. 69. S.-b. No. 2, p. 81.

Answer to communication of J. H. Graves; eggs of *Mantis* [= *Phasmomantis*] *carolina* found in Ogle County, Ill.

972. RILEY, C. V. Lappet caterpillars on the apple. <Prairie Farmer, 3 August, 1867, [v. 36], n. s., v. 20, p. 69. S.-b. No. 2, p. 81.

Answer to communication of Perkins and Congdon; description of the larva, pupa, cocoon, and imago of *Gastropacha* [= *Tolype*] *velleda.*

973. RILEY, C. V. Apple-bark lice on pears. <Prairie Farmer, 3 August, 1867, [v. 36], n. s., v. 20, p. 69. S.-b. No. 2, p. 81.

Mytilaspis pomicorticis [= *pomorum*] on the fruit of pear-trees; said to occur on currants, plum, and black oak.

974. RILEY, C. V. Currant-bush borer. <Prairie Farmer, 3 August, 1867, [v. 36], n. s., v. 20, p. 69. S.-b. No. 2, p. 81.

Answer to inquiry of H. B. Kinne; habits, description, and means against *Ægeria tipuliformis.*

975. RILEY, C. V. Apple-leaf crumpler. <Prairie Farmer, 3 August, 1867, [v. 36], n. s., v. 20, p. 69. S.-b. No. 2, p. 81.

Answer to inquiry of H. C. Clock; habits and means against *Phycita nebulo* [= *Acrobasis indiginella*].

976. RILEY, C. V. Tomato-stalk borer. <Prairie Farmer, 3 August, 1867, [v. 36], n. s., v. 20, p. 69. S.-b. No. 2, p. 81.

Answer to inquiry of O. G. Nevins; food-plants of *Gortyna nitela.*

977. RILEY, C. V. A few errors corrected. <Wisc. Farmer, 17 August, 1867. S.-b. No. 2, p. 83.

Habits of *Doryphora 10-lineata* and of *Carpocapsa pomonella.*

978. RILEY, C. V. Curculio. <Prairie Farmer, 7 September, 1867, [v. 36], n. s., v. 20, p. 148. S.-b. No. 2, p. 82.

Answer to inquiry of J. Shearer; means against *Conotrachelus nenuphar.*

979. RILEY, C. V. Hop-vine caterpillars. <Prairie Farmer, 7 September, 1867, [v. 36], n. s., v. 20, p. 148. S.-b. No. 2, p. 82.

Communication from J. H. Graves, with answer; *Mantis* [= *Phasmomantis*] *carolina* breeds as far north as Ogle County, Ill. Description of larva and imago of *Hypena humuli* [= *scabra*]; means against it.

980. Riley, C. V. Wheat-worms. <Prairie Farmer, 7 September, 1867, [v. 36], n. s., v. 20, p. 148. S.-b. No. 2, p. 82.

Communication from C. Campbell, with answer; description of larva and imago and habits of *Pyralis* [=*Asopia*] *farinalis*; ravages of *Tenebrio molitor*; means against both species.

981. Riley, C. V. [Root-borer.] <Prairie Farmer, 7 September, 1867, [v. 36], n. s., v. 20, p. 148. S.-b. No. 2, p. 82.

Communication from S. T. Kelsey, with answer; ravages of an unknown cerambycid larva which destroys the roots of various plants.

982. Riley, C. V. Bark-lice on the pear. <Prairie Farmer, 7 September, 1867, [v. 36], n. s., v. 20, p. 148. S.-b. No. 2, p. 82.

Letter from T. D. Plumb, with answer; *Mytilaspis pomicorticis* [=*pomorum*] lives on fruit of pear and crab-apple; the scale a secretion; extent of injuries caused by this insect.

983. Riley, C. V. A nuisance made useful. <Prairie Farmer, 7 September, 1867, [v. 36], n. s., v. 20, p. 148. S.-b. No. 2, p. 82.

Means against *Doryphora* 10-*lineata* discredited.

984. Riley, C. V. Strawberry leaf-roller. <Prairie Farmer, 5 October, 1867, [v. 36], n. s., v. 20, p. 212. S.-b. No. 2, p. 100.

Answer to inquiry of N. R. Strong; *Anchylopera* [=*Phoxopteris*] *fragariæ* injures strawberry leaves; larvæ of *Selandria* [=*Monostegia*] *rosæ* also eat leaves of the strawberry.

985. Riley, C. V. False caterpillars on the pine. <Prairie Farmer, 5 October, 1867, [v. 36], n. s., v. 20, p. 212. S.-b. No. 2, p. 101.

Answer to inquiry of A. S. Fuller; habits and description of *Lophyrus lecontei.*

986. Riley, C. V. An unknown worm. <Prairie Farmer, 5 October, 1867, [v. 36], n. s., v. 20, p. 212. S.-b. No. 2, p. 101.

Extract from Beaver Dam Citizen, with comments; habits and description of *Eristalis* sp.

987. [Riley, C. V.] Bark-louse. <Prairie Farmer, 19 October, 1867, [v. 36], n. s., v. 20, p. —. S.-b. No. 2, p. 75.

Benzine and soap as a means against bark-lice.

988. [Riley, C. V.] Editorial excursion to the Rocky Mountains. <Prairie Farmer, 7 December, 1867, [v. 36], n. s., v. 20, pp. 353–354. S.-b. No. 2, pp. 112–113.

List of plants, insects, and mammals observed.

989. Riley, C. V. Bark-lice. <Prairie Farmer, 21 December, 1867, [v. 36], n. s., v. 20, p. 389. S.-b. No. 2, p. 112.

Answer to inquiries of G. Backster and J. C. Cobbey; means against *Mytilaspis pomicorticis* [=*pomorum*].

990. Riley, C. V. Root Aphis. <Prairie Farmer, 21 December, 1867, [v. 36], n. s., v. 20, p. 389. S.-b. No. 2, p. 112.

Answer to inquiry of J. M. Jordan; means against the root and stem forms of *Schizoneura lanigera.*

991. [Riley, C. V.] The Colorado potato-beetle. <Prairie Farmer, 21 December, 1867, [v. 36], n. s., v. 20, p. 389. S.-b. No. 2, p. 112.

Communications from C. W. Murtfeldt asserting the possession of poisonous qualities by the larvæ of *Doryphora* 10-*lineata.*

992. **Riley, C. V.** Cut-worm. Fall and spring plowing. <Moore's Rural New Yorker, ———, 1867. S.-b. No. 2, p. 94.

Criticism of article by Agricola.

993. **Riley, C. V.** Entomology. <Prairie Farmer Annual [No. 1 for 1868], 1867, pp. 53–59, 6 figs. S.-b. No. 2, pp. 125–126; No. 14, pp. 216–219.

Descriptions and figures of larva, pupa, and imago of *Coptocycla* [=*Cassida*] *bivittata*; habits, seasons, and means against it; list of *Cassididæ* injurious to sweet-potato. Descriptions of larva, nidus, and imago of *Desmia maculalis*, figures pupa; habits and seasons of and means against it. Figures *Colaspis flavida*; describes its supposed habits. Food-plants of *Heliothis armigera*. Figures larva and imago of *Gortyna nitela*; its food-plants, seasons, and hibernation. Figures larva and imago of *Heliothis phlogophagus*; synonymy, geographical distribution, and means against it; remarks on the balance of nature. Figures larva, pupa, cocoon, and imago of *Asopia costalis*; its synonymy and ravages.

994. **Riley, C. V.** Bark-lice. <Prairie Farmer, 15 February, 1868, [v. 37], n. s., v. 21, p. 100. S.-b. No. 2, p. 118.

Answer to inquiry of J. Hawkins; natural limitation and parasites of *Mytilaspis pomicorticis* [=*pomorum*]; it attacks healthy and unhealthy trees; means against it; experience with washes.

995. **Riley, C. V.** Potato-beetle. <Prairie Farmer, 22 February, 1868, [v. 37], n. s., v. 21, p. 117. S.-b. No. 2, p. 119; No. 3, p. 58.

Answer to inquiry of F. T. Moore; invention of a machine for killing *Doryphora 10-lineata*; hand-picking and heavy mulching the most available remedies.

996. **Riley, C. V.** Apple-tree plant-lice. <Prairie Farmer, 22 February, 1868, [v. 37], n. s., v. 21, p. 117. S.-b. No. 2, p. 119; No. 3, p. 58.

Letter from L. M., with answer; habits of and means against *Aphis mali*.

997. **Riley, C. V.** Apple-root blight. <Prairie Farmer, 22 February, 1868, [v. 37], n. s., v. 21, p. 117. S.-b. No. 2, p. 119; No. 3, p. 58.

Answer to inquiry of C. S. J.; *Schizoneura lanigera* not the cause of "rotten root."

998. **Riley, C. V.** Apple leaf-crumpler. <Prairie Farmer, 22 February, 1868, [v. 37], n. s., v. 21, p. 117. S.-p. No. 2, p. 119; No. 3, p. 58.

Answer to inquiry of J. M. Pearson; means against *Phycita nebulo* [= *Acrobasis indiginella*].

999. **Riley, C. V.** Tree-cricket. <Prairie Farmer, 14 March, 1868, [v. 37], n. s., v. 21, p. 164. S.-b. No. 2, p. 120; No. 3, p. 58.

Letter from J. J. Huggins, with answer; place of oviposition of *Œcanthus niveus*; list of plants in which this species oviposits.

1000. **Riley, C. V.** Egg-masses and cocoons on apple-trees. <Prairie Farmer, 14 March, 1868, [v. 37], n. s., v. 21, p. 164. S.-b. No. 2, p. 120; No. 3, p. 58.

Answer to inquiry of a correspondent; description of egg-masses and of larva of *Orgyia leucostigma*; beneficial influence and means of encouraging parasites.

1001. RILEY, C. V. Hop insects; Hop Aphis. <Prairie Farmer, 21 March, 1868, [v. 37], n. s., v. 21, p. 184. S.-b. No. 3, p. 58.

Brief account of and means against *Hypena humuli* [= *scabra*] and *Phorodon humuli*.

1002. RILEY, C. V. Supposed eggs of the preying Mantis. <Prairie Farmer, 28 March, 1868, [v. 37], n. s., v. 21, p. 201. S.-b. No. 2, p. 121; No. 3, p. 59.

Answer to inquiry of J. H. Graves; cocoons of *Rhogas* sp. attached in a mass to twigs of an apple-tree.

1003. RILEY, C. V. Oak-tree borer. <Prairie Farmer, 28 March, 1868, [v. 37], n. s., v. 21, p. 201. S.-b. No. 2, p. 121; No. 3, p. 59.

Answer to inquiries of E. G. Mygatt; habits and food-plants of *Xyleutes* [= *Cossus*] *robiniæ*; means against it.

1004. RILEY, C. V. Maple-bark lice. <Prairie Farmer, 28 March, 1868, [v. 37], n. s., v. 21, p. 201. S.-b. No. 2, p. 121; No. 3, p. 59.

Lecanium sp. found on twigs of sugar-maple.

1005. RILEY, C. V. Eggs of the katydid. <Prairie Farmer, 28 March, 1868, [v. 37], n. s., v. 21, p. 201. S.-b. No. 2, p. 121; No. 3, p. 59.

Answer to inquiry of W. Colwell; habits and food-plants of *Platyphyllum* [= *Cyrtophyllus*] *concavus*.

1006. RILEY, C. V. Eggs of tree-cricket in raspberry canes. <Prairie Farmer, 28 March, 1868, [v. 37], n. s., v. 21, p. 201. S.-b. No. 2, p. 121; No. 3, p. 59.

Letter from E. T. Nelson, with answer; oviposition of *Œcanthus niveus* in raspberry canes; means against this insect.

1007. RILEY, C. V. Bark-lice. <Prairie Farmer, 28 March, 1868, [v. 37], n. s., v. 21, p. 201. S.-b. No. 2, p. 121; No. 3, p. 59.

Answer to inquiry of C. D. Robinson; means against *Mytilaspis pomicorticis* [=*pomorum*].

1008. RILEY, C. V. Bark-lice again; the native species. <Prairie Farmer, 28 March, 1868, [v. 37], n. s., v. 21, p. 201. S.-b. No. 2, p. 121; No. 3, p. 59.

Letter from N. Coleman, with answer; comparative characters of *Mytilaspis pomicorticis* [=*pomorum*] and *Diaspis harrisii* [= *Chionaspis furfurus*]; food-plants of the latter.

1009. RILEY, C. V. Dahlia-stalk borer. <Prairie Farmer, 28 March, 1868, [v. 37], n. s., v. 21, p. 201. S.-b. No. 2, p. 121; No. 3, p. 59.

Answer to inquiry of S. M. Wierman; means against *Gortyna nitela*.

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1013. RILEY, C. V. Beetles in stomach ot meadow-lark. <Prairie Farmer, 9 May, 1868, [v. 37], n. s., v. 21, p. 301. S.-b. No. 3, p. 60.

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1016. RILEY, C. V. Tanzy for borers. <Prairie Farmer, 9 May, 1868, [v. 37], n. s., v. 21, p. 301. S.-b. No. 3, p. 60.

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Means against *Saperda bivittata* [=*candida*].

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Tettigonia coagulata injurious to leaves of grape-vines.

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Natural history of and means against *Doryphora 10-lineata*.

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The larva of *Attacus cecropia* spins its cocoon on apple and other trees.

1029. **Riley, C. V.** Will unimpregnated eggs hatch? <Prairie Farmer, 27 June, 1868, [v. 37], n. s., v. 21, p. 410. S.-b. No. 3, p. 60.

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Effect of several liquid preparations upon the larvæ of *Elateridæ* immersed in them; corn soaked in turpentine grew unmolested by wire-worms.

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Means against *Selandria* [=*Eriocampa*] *cerasi* and *Nematus ventricosus* [=*ribesii*].

1032. **Riley, C. V.** What becomes of bumble-bees? <Cultivator and Country Gentleman, 2 July, 1868, v. 32, p. 18.

Answer to Anna's "Bumble-bees;" only the queens of *Bombus* survive the winter; new colonies formed by hibernated queens.

1033. **Riley, C. V.** Large gray straight-horned snout-beetle. <Prairie Farmer, 4 July, 1868, [v. 38], n. s., v. 22, p. 2–3, figs. S.-b. No. 3, pp. 31, 56.

Descriptions and figures of larva and imago of *Ithycerus noveboracensis*; method of oviposition; injuries to apple, oak, and other trees.

1034. **Riley, C. V.** The seventeen-year Cicada. <Prairie Farmer, 4 July, 1868, [v. 38], n. s., v. 22, p. 2. S.-b. No. 3, pp. 31, 56.

Dates and localities of occurrences of *Cicada* [= *Tibicen*] *septendecim*; occurrence of *C.* [= *T.*] *tredecim* in Missouri.

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Answer to inquiry of J. A. Jackson; death of raspberry canes discussed; in this case not the result of injury by insects.

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Letter from B. B. Warfield, with answer; habits, food-plants, and means against *Thyridopteryx ephemeræformis*; description of the female.

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1040. RILEY, C. V. Bark-lice again. <Prairie Farmer, 18 July, 1868, [v. 38], n. s., v. 22, p. 18, 2 figs. S.-b. No. 3, pp. 34, 54.

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1041. RILEY, C. V. Larvæ of grape-vine flea-beetle. <Prairie Farmer, 18 July, 1868, [v. 38], n. s., v. 22, p. 18. S.-b. No. 3, pp. 34, 54.

Answer to inquiry of J. A. Pettingil; leaves of grape-vine eaten by larvæ of *Haltica chalybea*; description of larva; habits and means against it.

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1044. RILEY, C. V. Driving potato-beetles. <Prairie Farmer, 15 August, 1868, [v. 38], n. s., v. 22, p. 50. S.-b. No. 3, pp. 36.

Doryphora 10-*lineata* can not be driven; *Macrobasis unicolor* can; care should be taken in sending the former through the mail, so as not to increase its distribution.

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1046. RILEY, C. V. Bugs on grape-vines. <Prairie Farmer, 15 August, 1868, [v. 38], n. s., v. 22, p. 50. S.-b. No. 3, p. 36.

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1047. RILEY, C. V. Corn-worms. <Prairie Farmer, 15 August, 1868, [v. 38], n. s., v. 22, p. 50. S.-b. No. 3, p. 36.

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1048. RILEY, C. V. Large worm on apple-tree. <Prairie Farmer, 15 August, 1868, [v. 38], n. s., v. 22, p. 50. S.-b. No. 3, p. 36.

Answer to inquiry of J. M. Devore; description of *Papilio turnus*, ♀, form *glaucus*, which pupated on trunk of apple-tree.

1049. RILEY, C. V. White-pine trees killed by borers. <Prairie Farmer, 26 September, 1868, [v. 38], n. s., v. 22, p. 98.

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1051. RILEY, C. V. Worms feeding on the hawthorn. <Prairie Farmer, 26 September, 1868, [v. 38], n. s., v. 22, p. 98.

1052. RILEY, C. V. Twig borers, sack-bearers, etc. <Prairie Farmer. 19 December, 1868, [v. 38], n. s., v. 22, p. 194.

1053. RILEY, C. V. Oil beetles. <Prairie Farmer, 19 December, 1868, [v. 38], n. s., v. 22, p. 194.

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1056. RILEY, C. V. Report of committee on entomology. <Trans. Ill. Hortic. Soc. for 1867, 1868, n. s., v. 1, pp. 105–107, figs. 1–8.

Criticism of previous reports; effect of cold on *Aphis mali*; distribution, food-plants, and means against *Doryphora* 10-*lineata*; distinctions between *D.* 10-*lineata* and *D. juncta*; ravages of *Lytta* [=*Epicauta*] *vittata*, *L.* [=*E.*] *cinerea*, and *L. atrata* [=*E. pennsylvanica*] on potato, and *L.* [=*Pomphopæa*] *ænea* on fruit-trees; means against them; ravages of *Haltica* [=*Crepidodera*] *cucumeris* on potato; habits, ravages, and specific characters of *Cassididæ* found on sweet potato; *Saperda bivittata* [=*candida*] biennial; history and development of *Mytilaspis pomicorticis* [=*pomorum*]; its food-plants, supposed hermaphroditism [parthenogenesis] and mode of production of scale of this species; difficulty of explaining the production of galls; habits, characters, food-plants, and ravages of *Conotrachelus nenuphar*, *Carpocapsa pomonella*, *Heliothis armigera*, *Gortyna nitela*, *Mamestra picta*, *Procris* [=*Harrisina*] *americana*, *Selandria vitis* [=*Blennocampa pygmæa*], *Darapsa* [=*Ampelophaga myron*, and *Desmia maculalis*; notes on other insects injurious to grape, apple, and wheat, and on *Mycetophila persica*, *Emphytus* [=*Harpiphorus*] *maculatus*, *Agrotis* [=*Hadena*] *devastatrix*, and *Hadena juncta*; note on recent writings by the author.

1057. **Riley, C. V.** Entomology. <Prairie Farmer Annual [No. 2 for 1869], 1868, pp. 30–41, 6 figs. S.-b. No. 14, pp. 220–226.

Directions for collecting and preserving insects; descriptions of apparatus and cabinets; means against cabinet pests; descriptions and figures of all stages, except egg, of *Lophyrus abbotii* and *L. lecontei*; habits and food-plants of and means against both species; figures of eggs, pupæ, and imago of *Cicada* [= *Tibicen*] *septendecim* and of twig punctured by imago; dates and localities of occurrence of this species and of *C.* [= *T.*] *tredecim*; *C.* [= *T.*] *cassinii* a form of this insect; figures larva, puparium, and imago of *Cephalemyia* [= *Œstrus*] *ovis*; habits and ravages of and means against it; imago viviparous in the nostrils of sheep.

1058. **Riley, C. V.** The American Meromyza, *Meromyza americana*, Fitch. Attacking wheat just before it ripens. <Moore's Rural New Yorker, 30 January, 1869, v. 20, p. 71, fig. S.-b. No. 3, p. 83.

Habits and ravages of *Meromyza americana*; figures larva, pupa, and injured stalk of wheat; related European species have similar habits; remedies and natural enemies.

1059. **Riley, C. V.** First annual report on the noxious, beneficial, and other insects of the State of Missouri, made to the State Board of Agriculture, pursuant to an appropriation for this purpose from the legislature of the State. <4th Ann. Rept. State Board of Agric. for 1868, March, 1869, pp. 182–187, 98 figs. Separate: <Jefferson City, Mo., March, 1869, pp. 182–187, 2 pl., 98 figs. Notice: <Amer. Ent., April, 1869, v. 1, p. 165.

CONTENTS.

Page.

INTRODUCTORY 3

NOXIOUS INSECTS.

THE BARK-LICE OF THE APPLE-TREE 7

Two species known to occur in the United States, 7—Harris's bark-louse not numerous enough to do material damage, 7.

The oyster-shell bark-louse, *Mytilaspis pomorum* 7

Difference in the scales of the two species, 7—Introduction of the oyster-shell bark-louse from Europe and its spread in the United States, 8—Precautionary measures to prevent its introduction into Missouri, 8—Its habits studied by different observers in 1867, 9—Seasonal notes on the development of the insect, 10—Only one annual brood in Missouri, 12—Formation and nature of the scale, 12—Rare occurrence of males, 14—Difference of opinion among observers as to the mode of growth of the scale, 14—Difficulty of explaining the spread of the insect from one tree to another, 15—Its occurrence upon other kinds of trees, 15—Natural enemies, 16—Artificial remedies, 16—Examination of young trees before planting, 16—Washing with alkalies, etc., 17—Scrubbing the branches with a stiff brush, 17—Fumigating, 17—Application of sheep-manure, 17—Washes in general ineffective, 17—The insect can most successfully be fought during three or four days of the year only, 18.

1059. Riley, C. V.—Continued.

THE PERIODICAL CICADA, *Tibicen septendecim* 18

Its singular life history, 18—Seventeen and thirteen year races, 19—The two races not distinct species, 19—Two distinct forms occurring in both broods, 20—Season of their appearance and disappearance, 22—Natural history and transformations, 22—Elevated chambers of the pupa, 22—The larvæ frequently occurring at great depth in the ground, 24—The operation of emerging from the pupa, 24—Only the males are capable of singing, 24—Trees in which the females deposit their eggs, 24—Mode of oviposition, 24—The newly hatched larva, 25—The W on the wings of the Cicada, 25—Enemies, 26—Fungus infesting the imago, 26—The sting of the Cicada, 26—Wide-spread fear of the insect on account of its supposed stinging powers, 26—Explanations of the sting, 27—Injury caused by the insect, 29—by the larva, 29—by the imago, 29—Fruitless attempts to stop the injury, 30—Chronological table of all well-ascertained broods in the United States, 30—The insect will appear during the next 17 years somewhere in the United States every year except in 1873, 41—Number of broods that will appear in the next 17 years in the different States, 42.

APPLE-TREE BORERS 42

The round-headed apple-tree borer, *Saperda candida* 42

It is more numerous in trees on high land than on low ground, 42—Extent of its injury, 43—Its larva, 43—Appearance of the imago, 43—The hole made by the young larva, 44—It remains nearly three years in the larva state, 44—Its pupa state, 44—Remedies, 45—Alkaline washes, 45—Killing the larva by hot water, 45—Cutting out the larva, 46.

The flat-headed apple-tree borer, *Chrysobothris femorata* 46

Differences between it and the foregoing species, 46—Habits of the beetle, 47—Amount of injury caused by it, 47—Parasite attacking it, 47—Remedies, 47.

THE PEACH BORER, *Sannina exitiosa* 47

Its nature, 47—Differences in the sexes, 48—Remedies, 48—The mounding system the best remedy, 48—Testimony as to the value of the mounding system, 48—Other remedies, 49.

THE PLUM CURCULIO, *Conotrachelus nenuphar* 50

Difference of opinion among authors on some points in its natural history, 50—Reasons for this difference of opinion, 51—Facts in its natural history, 52—It causes the spread of the peach-rot, 52—Fruit trees attacked and those not attacked by it, 53—It may hibernate as larva or pupa, but does generally as imago, 53—Mode of egg-laying, 54—It has one annual brood, 55—Walsh's experiments to show that it is two-brooded, 55—Natural remedies, 56—No parasites known to infest it, 56—Enemies, 57; The Pennsylvania soldier-beetle and its larva, 57; Lacewing-larva, 57; The subangular ground-beetle, 58; Ground-beetle larva, probably of the Pennsylvania ground-beetle, 59—Hogs as Curculio destroyers, 59—Artificial remedies, 60—Jarring the trees the most effectual method, 60—Dr. Hull's Curculio catcher, 60—Lessons for the fruit-grower from the account of the Curculio, 62.

1059. Riley, C. V.—Continued.

THE CODLING MOTH OR APPLE WORM, *Carpocapsa pomonella* 62

It is common wherever apples are grown, 62—Description of the insect in its different states, 63—Its life-history, 63—Other fruits attacked by it, 64—Remedies, 65—Picking up the fallen fruit, 65—Entrapping the worms the best remedy, 66—Trimble's hay band system and how to apply it, 66—Attracting the moth by fires, 67.

CUT-WORMS 67

The natural history of twelve distinct species, 67—Definition of the term "cut-worm," 67—Habits of cut-worms, 67—Their natural history briefly given, 68—Difficulty of breeding them in captivity, 69—Climbing cut-worms, 69—Injury done by them to orchards, 69—Fruit trees and shrubs they attack, 70—They attack large trees, 71.

The variegated cut-worm, *Agrotis saucia* 72

The full-grown larva, 72—The eggs, 72—Habits of the larva, 72—Cut-worm moths deposit their eggs on the leaves and not on the ground, 73—The imago, 73—Description of the insect as larva, pupa, and imago, 74.

The dark-sided cut-worm, *Agrotis messoria* 74

General characters of the larva, 74—Habits of, and injury done by it, 75—Description of imago, 75; of the larva and chrysalis, 76.

The climbing cut-worm, *Agrotis scandens* 76

Injury done by the larva, 77—General characters of the larva, 77, of the moth, 78—Description of the larva, 78; of the imago, 78.

The w-marked cut-worm, *Agrotis clandestina* 79

General characters of the larva, 79—Plants it attacks, 79—Characters of the moth, 79—Description of the larva and chrysalis, 79.

The greasy cut-worm, *Agrotis ypsilon* 80

The larva very variable in coloration, 80—Its injury to tomato and tobacco plants, 80—General characters of the moth, 80—Description of larva, chrysalis, and imago, 81.

The western striped cut-worm, *Agrotis herilis* 81

Resemblance of its larva to that of the corn rustic, 81—General characters of the worm and moth, 82—Description of the larva, 82.

The dingy cut-worm, *Agrotis subgothica* 82

Difference between it and the foregoing species, 82—General characters of pupa and imago, 82—At least three species of our cut-worms are difficult to distinguish, 83—Description of larva, chrysalis, and imago, 83.

The glassy cut-worm, *Hadena devastatrix* 83

Habits and general characteristics of the larva, 83—Characteristics of the moth, 84—Description of larva and chrysalis, 84.

The speckled cut-worm, *Hadena subjuncta* 84

Characteristics and habits of the insect, 84—Description of larva, chrysalis, and imago, 85.

The small white bristly cut-worm, *Hadena renigera* 86

Habits of the worm, 86—Characteristics of the moth, 86—Description of larva, chrysalis, and imago, 86.

Other cut-worms 87

Fitch's account of the corn cut-worm and the yellow-headed cut-worm, 87.

The wheat cut-worm 87

Injury caused by it, 87—Description of the larva, 88.

1059. RILEY, C. V.—Continued.

CUT-WORMS—Continued.

Remedies against cut-worms 89

Natural enemies, 89; *Microgaster militaris*, 89; *Paniscus geminatus*, 89; The spined soldier-bug, 89; The cut-worm lion, 89—Other enemies, 90—Artificial remedies for climbing cut-worms, 90; for common field cut-worms, 91.

INSECTS INFESTING THE POTATO 91

General remarks, 91—Number of species affecting the potato, 92.

The stalk-borer, *Gortyna nitela* 92

Habits of the larva and imago, 92—Remedy, 93.

The potato stalk-weevil, *Trichobaris trinotata* 93

Its geographical distribution, 93—Its habits, 93—Remedy, 95.

The potato- or tomato-worm, *Protoparce celeus* 95

It can not sting with its horn, 95—Its chrysalis, 95—How the imago differs from the tobacco-worm moth, 95—Remedies and parasites, 96.

Blister-beetles, *Meloidæ* 97

The striped blister-beetle, 96—The ash-gray blister-beetle, 97—The black-rat blister-beetle, 98—The black blister-beetle, 98—The margined blister-beetle, 98—Synonymical remarks, 98—Remedies for blister-beetles, 99.

The three-lined leaf-beetle, *Lema trilineata* 99

Merdigerous habit of the larva, 99—It has two annual broods, 100—Other notes on the habits of the insect, 100.

The cucumber flea-beetle, *Crepidodera cucumeris* 101

The Colorado potato-beetle, *Doryphora 10-lineata* 101

Its past history and future progress, 101—Its native home, 101—Its gradual spread eastward, 102—Its confusion with the bogus Colorado potato-beetle, 103—How the two species differ in habits, 104; in their larval states, 104; in the egg state, 105—Description of the larva of *Doryphora juncta*, 106—Differences in the imagos of the two species, 106—Habits of the Colorado potato-beetle, 107—When it appears and disappears, 107—Number of eggs laid by each female, 107—Food-plants, 107—Singular fact that *D. juncta* has not acquired the habit of attacking the potato, 108—Natural remedies, 109—Complicated economy of nature, 109—Decrease in the number of potato-beetles on account of increase in the number of parasites, 109—The Colorado potato-beetle parasite, 111—Its general character and habits, 111—Description of *Lydella doryphoræ*, 111—Lady-birds and their larvæ, 112—The spined soldier-bug, 113—The common squash-bug, erroneously considered an enemy of the potato-beetle, 113—The bordered soldier-bug, 114—The many banded robber, 114—The rapacious soldier-bug, 114—The Virginia tiger-beetle, 115—The fiery ground-beetle, 115—Blister-beetles, 115—The larvæ not touched by fowl, 115—Artificial remedies, 116—Ineffectiveness of mixtures tried, 116—Killing the beetle early in spring, 116—Pincers for crushing the insect, 116—Benson's machine, 116—Proper choice of varieties of potatoes, 117—The pest will overrun the Eastern States, 117—Carelessness in transmitting specimens of the beetle, 117.

1059. Riley, C. V.—Continued.

THE APPLE-ROOT PLANT-LOUSE, *Schizoneura lanigera* 118

Three distinct kinds of rots affecting the roots of apple-trees, 118—The root-louse the cause of one of these rots, 118—The cause of the other rots still hidden, 119—The root-louse especially injurious in southerly latitudes, 119—It occurs also on other parts of the tree besides the root, 120—Description of the winged louse, 120—Fitch's description of the winged form refers to another species, 120—The root-louse belongs to the genus *Eriosoma*, 121—Natural enemies, 121; Chalcis-fly, 121; the root-louse Syrphus-fly, 121; *Scymnus cervicalis*, 122—Artificial remedies, 123.

THE WOOLLY ELM-TREE LOUSE, *Schizoneura rileyi* 123

Its general appearance and habits, 123—Description of the winged form, 124.

INSECTS INJURIOUS TO THE GRAPE-VINE 124

The new grape-root borer, *Prionus laticollis* 124

Reports on the damage caused by it, 124—Description of the larva, 126—It belongs probably to the cylindrical Orthosoma, 126—Former accounts of the natural history of this beetle, 127—Its injury known for several years, 127—Remedies, 128.

The grape curculio, *Craponius inæqualis* 128

Nature of the damage done by it, 128—Its larva, 128—The perfect beetle, 129—No injury done by it in 1868, 129.

The grape-seed Curculio, *Isosoma vitis* 129

General appearance of the maggot, 129—Mr. Saunders' account of the damage done by it, 130.

The grape-cane gall Curculio, *Ampeloglypter sesostris* 131

The gall caused by it, 131—The larva, 131—Its transformation, 131—Description of the beetle, 132—Differences between it and a closely allied species, 132—The gall caused by the punctures of the female beetle, 132—Remedy, 132.

The grape-vine Fidia, *Fidia viticida* 132

It is very injurious in Missouri, 132—Habits of the beetle, 132—Remedies, 133.

The grape fruit-worm, *Eudemis botrana* 133

Amount and extent of the injury caused by it, 133—Characteristics of the larva, 134—Transformations, 134—Description of larva, chrysalis, and imago, 135—Remedies, 135.

The eight-spotted fofester, *Alypia 8-maculata* 136

Characteristics of the larva, 136—It is not numerous enough to cause serious injury, 136—Other caterpillars resembling it, 136.

The grape-vine plume, *Oxyptilus periscelidactylus* 137

Work of the larva, 137—Its habits and characteristics, 137—The moth, 137—Remedy, 138.

The snowy tree-cricket, *Œcanthus niveus* 138

Characteristics of the insects, 138—It is injurious, 138—Nature of the injury caused by it, 138—Remedy, 139.

THE RASPBERRY GEOMETER, *Synchlora rubivoraria* 139

Habits of the larva, 139—Parasite attacking it, 139—Characteristics of the moth, 139—Description of the larva, 139; of the imago, 140.

THE GOOSEBERRY FRUIT-WORM, *Dakruma convolutella* 140

Accounts of the injury caused by it, 140—Habits of the worm, 140—The moth, 141—Remedies, 141—Description of larva, chrysalis, and imago, 141.

1059. **Riley, C. V.**—Continued.

THE STRAWBERRY LEAF-ROLLER, *Phoxopteris fragariæ* 142

Extent and nature of the damage caused by it, 142—Habits of the insect, 142—Accounts of its injury in Indiana and Illinois, 142—Remedy, 143—Description of the imago and larva, 143.

THE WHITE-MARKED TUSSOCK-MOTH,* *Orgyia leucostigma* 144

The egg-mass, 144—The larva and larval changes, 144—The full-grown larva, 145—Habits of the larva, 145—Mode of casting off the larval skin, 145—The cocoon, 146—The imago, 146—Two annual broods, 146—Food-plants, 146—Remedies, 147.

THE BAG-WORM, *alias* BASKET-WORM, *alias* DROP-WORM, *Thyridopteryx ephemæriformis* 147

Its geographical distribution, 148—Injury caused by it, 148—The egg, 148—The larva and its growth, 148—Habits of the larva, 149—The chrysalis, 149—The sex distinguishable in the chrysalis state, 149—The imago, 149—Food-plants, 150—Parasites, 150; *Cryptus inquisitor*, 150; *Hemiteles thyridopterygis*, n. sp., 150—Remedies, 151.

THE AILANTHUS-WORM, *Œta punctella* 151

Injury done to the Ailanthus tree, 151—Habits of the larva, 151—The chrysalis, 151—The imago, 152—Geographical distribution, 152—Remedy, 152—Description of larva and chrysalis, 152; of the imago, 153.

THE WALNUT TORTRIX, *Cacœcia rileyana* 153

Habits of the larva, 153—General appearance of the moth, 153—Phytophagic form of the insect on snowberry, 153—Description of larva, chrysalis, and imago, 154; of the variety *symphoricarpi*, 154.

THE SEED-CORN MAGGOT, *Anthomyia zeas* 154

Accounts of damage caused by it, 154—The maggot, 155—Transformation, 155—Description of the imago, 155—Remedy, 155—Habits of *Anthomyia* larvæ, 156.

THE WHITE GRUB, *Lachnosterna fusca* 156

Account of the damage caused by it, 156—Injury done by the perfect insect, 157—Résumé of its life-history, 157—Remedies, 157—Regularity in the appearance of the beetle, 158—Accounts of the fungus infesting the white grub, 158.

THE AMERICAN MEROMYZA, *Meromyza americana* 159

Nature of the damage caused by it, 159—Characteristics of larva, chrysalis, and imago, 160—European Diptera with similar habits, 160—Remedies, 161.

THE SHEEP BOT-FLY OR HEAD-MAGGOT, *Œstrus ovis* 161

The insect in its different states, 161—Its larva, 162—Pupa, 162—Characteristics of the imago, 162—Fatal results of the presence of the maggot in the head of the sheep, 163—Rabbits attacked by gad-fly, 164—Testimony regarding the viviparous habits of the bot-fly, 164—Remedies, 165.

INSECT ENEMIES OF THE HONEY-BEE 166

The bee-moth or wax-worm, *Galleria cereana* 166

General appearance of the moth, 166—There are no moth-proof bee-hives, 166—Habits of the worm, 167—How its presence in the hive may be recognized, 167—Prevention and remedy, 167.

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* Reprint: <Cultivator and Country Gentleman, 14 May, 1874, v. 39, pp. 310–311, 3 figs.

1059. Riley, C. V.—Continued.

Insect enemies of the honey-bee—Continued.

The bee-killer, *Promachus apivorus*.......................... 168

It is an Asilid fly, 168—Mr. Thompson's account of the fly, 168—How it captures and kills bees, 168—No remedy known, 168.

BENEFICIAL INSECTS.

The rear-horse, *alias* camel-cricket, *alias* devil's riding-horse, *Phasmomantis carolina*.. 169

Its food, 169—How it grasps its prey, 169—Difference in the sexes, 170—The larva, 170—The egg-mass, 170—The mode of egg-laying, 170—Voracious disposition of the Mantis, 171—Its beneficial influence, 171—Trachina parasite of the Mantis, 171.

INNOXIOUS INSECTS.

The Solidago gall-moth, *Gelechia gallæsolidaginis* 173

Gall caused by *Trypeta solidaginis*, 173—Gall produced by the Solidago gall-moth, 173—Its natural history, 173—Provision of the larva for its protection within the gall, 174—Previous account of the gall, 174—Gall caused by *Cochylis hilarana* on *Artemisia campestris*, 175—Description of the Solidago gall-moth as larva, chrysalis, and imago, 175—Parasites attacking it, 175; the inflating chalcis, 176; *Eurytoma bolteri*, n. sp., 176; *Hemiteles* (?) *cressonii*, n. sp., 177; *Microgaster gelechiæ*, n. sp., 177; other parasites, 178—*Oberea* larvæ intruding in the gall, 178.

The chickweed [=knotweed] Geometer, *Hæmatopis grataria*.... 179

Its natural history, 179—Description of larva and chrysalis, 179.

The thistle plume, *Platyptilus carduidactylus* 180

Work of its larva on thistle-heads, 180—Description of the larva, chrysalis, and imago, 180.

1060. Riley, C. V. Eggs of the Mantis or rear-horse. <Moore's Rural New Yorker, 10 April, 1869, v. 20, p. 234, 2 figs. S.-b. No. 3, p. 52.

Answer to inquiry of T. C. Bartle; description of *Mantis* [=*Phasmomantis*] *carolina*; its food, habits, oviposition, and parasites; figures its egg-masses and those of *Phylloptera* [*Amblycorypha*] *oblongifolia*.

1061. Riley, C. V. Native bark-lice on apple-trees. <Prairie Farmer, 17 April, 1869, [v. 39], n. s., v. 23, p. 122, 1 fig. S.-b. No. 3, p. 57.

Answer to inquiry of T. B. Gardner; life history of and means against *Diaspis harrisii* [= *Chionaspis furfurus*]; figure of the same.

1062. Riley, C. V. Curculio. <Prairie Farmer, 17 April, 1867, [v. 39], n. s., v. 23, p. 122. S.-b. No. 3, p. 57.

Answer to inquiry of James Weed; habits of and means against *Conotrachelus nenuphar*.

1063. Riley, C. V. Cherry-tree borers. <Prairie Farmer, 17 April, 1869, [v. 89], n. s., v. 23, p. 122. S.-b. No. 3, p. 57.

Answer to inquiry of Onargo Horticultural Society; larvæ of *Buprestis* [=*Dircera*] *divaricata* and of *Trochilium* sp., injurious to cherry-trees; soft-maple attacked by *T.* [=*Ægeria*] *acerni*; means against these insects.

1064. RILEY, C. V. White-grub fungus. <Prairie Farmer, 15 May, 1869, [v. 39], n. s., v. 23, p. 154. S.-b. No. 3, p. 76.

Letter from D. W. Tindall, with answer; ravages of *Lachnosterna quercina* [=*fusca*] in Clinton County, Mo., in 1868; *Torrubia* growing on the larvæ in 1869.

1065. RILEY, C. V. The canker-worm, *Anisopteryx vernata* Peck. <Moore's Rural New Yorker, 29 May, 1869, v. 20, p. 345, figs. S.-b. No. 3, p. 73.

Description, figures, and natural history of canker-worms; the two species are confounded.

1066. RILEY, C. V. The seed-corn maggot, *Anthomyia zeas*, Riley. Destroying the seed after it is planted. <Moore's Rural New Yorker, June, 1869, fig. S.-b. No. 3, p. 81. Advance print, with changes: <1st Ann. Rept. State Ent. Mo., March, 1869, pp. 154–156, figs. 86–87.

See No. 1059 for synopsis of contents.

1067. RILEY, C. V. Cherry-tree plant-lice. <Moore's Rural New Yorker, 10 July, 1869, v. 20, p. 443. S.-b. No. 3, p. 83.

Answer to inquiry of G. J. Magee; means against *Aphis* [=*Myzus*] *cerasi*.

1068. RILEY, C. V. Gooseberry span-worms. <Moore's Rural New Yorker, 10 July, 1869, v. 20, p. 443. S.-b. No. 3, p. 83.

Letter from A. Yancey, with answer; occurrence of *Eufitchia ribearia* in Iowa; habits and means against it; habits of and influence of weather on *Blissus leucopterus*; scarcity of *Doryphora 10-lineata* in Iowa.

1069. RILEY, C. V. Apple-leaf crumpler mistaken for Curculio. <Prairie Farmer, 10 July, 1869, [v. 40], n. s., v. 24, p. 218, fig. S.-b. No. 3, p. 80.

Letter from B. T. Taylor; improper use of the word Curculio; figures larva-case and imago of *Phycita nebulo* [= *Acrobasis indiginella*]; means against it; outline figure of *Conotrachelus nenuphar*.

1070. RILEY, C. V. Peach-tree borer. <Prairie Farmer, 10 July, 1869, [v. 40], n. s., v. 24, p. 218. S.-b. No. 3, p. 80.

Answer to inquiry of C. Allen; habits of and means against *Ægeria* [=*Sannina*] *exitiosa*.

1071. RILEY, C. V. To protect plums from Curculio. <Prairie Farmer, 10 July, 1869, [v. 40], n. s., v. 24, p. 218. S.-b. No. 3, p. 80.

Answer to inquiry of H. H. S.; recommends the collection of the imago of *Conotrachelus nenuphar* by jarring.

1072. RILEY, C. V. White-grub; information wanted. <Prairie Farmer, 28 August, 1869, [v. 40], n. s., v. 24, p. 274, 4 figs. S.-b. No. 3, p. 95.

Letter from A. T. V., with answer; habits of and means against *Lachnosterna quercina* [=*fusca*]; figures of larva and imago.

1073. RILEY, C. V. Unknown corn pest. <Prairie Farmer, 28 August, 1869, [v. 40], n. s., v. 24, p. 274. S.-b. No. 3, p. 95.

Letter from E. B. Hickey, with answer; ravages of cut-worms and of an unknown pest on maize; brief description and habits of the latter.

1074. Riley, C. V. Larva of the grape-vine flea-beetle. <Moore's Rural New Yorker, 28 August, 1869, v. 20, p. 555. S.-b. No. 3, pp. 100, 103.

Answer to inquiry of D. D. Vosburgh; habits, ravages, and means against *Graptodera* [= *Haltica*] *chalybea.*

1075. Riley, C. V. Rose bug. <Moore's Rural New Yorker, 28 August, 1869, v. 20, p. 555. S.-b. No. 3, pp. 100, 103.

Answer to inquiry of a subscriber; description of imago, transformations of, and means against *Macrodactylus subspinosus.*

1076. Riley, C. V. Large green caterpillar on the apple. <Moore's Rural New Yorker, 28 August, 1869, v. 20, p. 555. S.-b. No. 3, p. 100.

Answer to inquiry of S. E. A. Palmer; descriptions of larva and imago of *Attacus cecropia*; its habits and seasons.

1077. Riley, C. V. Conical galls on leaves of wild grape-vine. <Moore's Rural New Yorker, 28 August, 1869, v. 20, p. 555. S.-b. No. 3, p. 100.

Answer to inquiry of D. McClaine; description of galls of *Cecidomyia vitis-viticola*; characters of the larvæ of *Cecidomyia.*

1078. Riley, C. V. A strange bug. <Moore's Rural New Yorker, 28 August, 1869, v. 20, p. 555. S.-b. No. 3, p. 100; No. 4, p. 3.

The insects described in North Carolina's "A strange bug," were probably *Psocus venosus*; habits of the genus *Psocus.*

1079. Riley, C. V. Currant-worms and black-currants. <Moore's Rural New Yorker, 28 August, 1869, v. 20, p. 555. S.-b. No. 3, p. 100; No. 4, p. 3.

Critical review of Addi on currant-worms; in North America three species of larvæ feed on the leaves of currants, and two species of borers live within the stem.

1080. Riley, C. V. Curculio. <Moore's Rural New Yorker, 28 August, 1869, v. 20, p. 555. S.-b. No. 3, p. 100; No. 4, p. 3.

Commendation of an editorial criticism of Northwest's article on the Curculio.

1081. [Riley, C. V.] Insects injurious to the grape-vine. [No. 1.] <Amer. Ent., August, 1869, v. 1, pp. 231–234, figs. 169–173. Reprint, with slight changes: <2d Ann. Rept. State Ent. Mo., March, 1870, pp. 87–91, figs. 60–63.

Treats of *Prionus laticollis* and *P. imbricornis.* See No. 1127 for synopsis of contents.

1082. [Riley, C. V.] Insects infesting the sweet-potato. <Amer. Ent., August, 1869, v. 1, pp. 234–238, figs. 174–181. Reprint, with slight changes: <2d Ann. Rept. State Ent. Mo., March, 1870, pp. 56–64, figs. 26–38.

Treats of tortoise-beetles, *Cassididæ.* See No. 1127 for synopsis of contents.

1083. Riley, C. V. The borers. <Western Rural, September, 1869. S.-b. No. 4, p. 2.

Means against *Ægeria cucurbitæ* [= *Melittia ceto*].

1084. **Riley, C. V.** Supposed bark-lice eggs in Missouri. <Prairie Farmer, 4 September, 1869, [v. 40], n. s., v. 24, p. 282. S.-b. No. 3, p. 95.

Letter from J. Reed, with answer; eggs of a moth mistaken for those of *Mytilaspis pomicorticis* [=*pomorum*]; the latter unknown in Missouri.

1085. **Riley, C. V.** New York weevil on apple-trees. <Prairie Farmer, 4 September, 1869, [v. 40], n. s., v. 24, p. 282, 3 figs. S.-b. No. 3, p. 95.

Letter from R. M. Guy, with answer; figures of larva and imago, description of imago, geographical distribution, methods of oviposition, food-plants, and means against *Ithycerus noveboracensis*.

1086. **[Riley, C. V.]** Insects injurious to the grape-vine. No. 2. <Amer. Ent., September–October, 1869, v. 2, pp. 22–24, figs. 12–16. Reprint, with slight changes. <2d Ann. Rept. State Ent. Mo., March, 1870, pp. 71–73, figs. 44–48.

Treats of *Chærocampa pampinatrix* [=*Ampelophaga myron*]; see No. 1127 for synopsis of contents.

1087. **Riley, C. V.** Larva of the imperial moth. <Prairie Farmer, 9 October, 1869, [v. 40], n. s., v. 24, p. 322. S.-b. No. 3, p. 92.

Letter of C. H. Thayer, with answer; description of larva, pupa, and imago of *Ceratocampa* [=*Eacles*] *imperialis*; food-plants of the same and of *C.* [=*Citheronia*] *regalis*.

1088. **Riley, C. V.** Apple snout-beetle or four-humped Curculio. <Prairie Farmer, 9 October, 1869, [v. 40], n. s., v. 24, p. 322. S.-b. No. 3, p. 92.

Letter from R. W. Gandy, with answer; habits and description of *Anthonomus quadrigibbus*; recommends jarring.

1089. **Riley, C. V.** That venomous potato-worm! <Moore's Rural New Yorker, 20 November, 1869, v. 20, p. —. S.-b. No. 3, pp. 107; 112.

Critical review of several recent articles upon tomato-worms; structure and harmlessness of larvæ of *Sphingidæ*; geographical distribution of *Sphinx* [=*Protoparce*] *carolina* and *S. quinquemaculata* [=*P. celeus*].

1090. **[Riley, C. V.]** The bag-worm, *alias* basket-worm, *alias* drop-worm, *Thyridopteryx ephemeræformis*, Haw. <Amer. Ent., November, 1869, v. 2, pp. 35–38, fig. 24.

Geographical distribution, food-plants, seasons, transformations, parasites, copulation, and oviposition of and means against *Thyridopteryx ephemeræformis*; figures and descriptions of larva, larva-cases, pupa, and imago; description of eggs; abodes constructed by insects.

1091. **[Riley, C. V.]** Insects injurious to the grape-vine. No. 3. <Amer. Ent., November, 1869, v. 2, pp. 54–55, figs. 33–35. Reprint, with slight changes. <2d Ann. Rept. State Ent. Mo., March, 1870, pp. 74–76, figs. 49–51.

Treats of *Philampelus achemon*; see No. 1127 for synopsis of contents.

1092. **Riley, C. V.** The saddle-back caterpillar. <Moore's Rural New Yorker, 4 December, 1869, v. 20, p. —, fig. S.-b. No. 3, p. 103.

Letters from A. W. Baker and G. T. Cost, with answer; figures and characterization of the larva of *Empretia stimulea*; food-plants, urticating properties, and transformations; description of the imago.

1093. RILEY, C. V. The seventeen-year Cicada. <Prairie Farmer, ——— 1869. S.-b. No. 3, p. 55.

Answer to communication of W. J. B., concerning *Cicada* [= *Tibicen*] *septendecim.*

1094. RILEY, C. V. Death of a hen. <Rural New Yorker, ——— 1869, fig. S.-b. No. 3, p. 75.

Occurrence of *Goniocotes hologaster* in great numbers on a hen; means against the same; figure of it.

1095. RILEY, C. V. Cut-worm eggs. <Prairie Farmer, ——— 1869. S.-b. No. 3, p. 81.

Habits and place of oviposition of *Agrotis inermis* [= *saucia*]; description of its eggs and larvæ.

1096. RILEY, C. V. Potato bugs. <Prairie Farmer, ——— 1869. S.-b. No. 3, p. 81.

Means against *Doryphora* 10-*lineata.*

1097. RILEY, C. V. That glow-worm. <Cultivator and Country Gentleman, 6 January, 1870, v. 35, p. 5, fig. S.-b. No. 4, p. 23. Reprint: <Amer. Ent., October, 1880, v. 3, n. s., v. 1, p. 254, fig.

Figures larva and imago of *Photuris pennsylvanica*; *Photinus pyralis* also luminous in larval and adult stages; comparison with *Lampyris noctiluca.*

1098. [RILEY, C. V.] In memoriam. <Amer. Ent., December, 1869–January, 1870, v. 2, pp. 65–68.

Biographical and obituary notice of B. D. Walsh.

1099. [RILEY, C. V.] The harlequin cabbage-bug, *Strachia histrionica*, Hahn. <Amer. Ent., December, 1869–January, 1870, v. 2, pp. 79–80, fig. 56.

Enumeration of the enemies of the cabbage in the United States; methods of their injury; importation and spread of some species; figures of the imago; description of eggs, habits, geographical distribution, seasons, and odors of *Strachia* [= *Murgantia*] *histrionica*; extract from G. Lincecum's "Texan cabbage-bug."

1100. [RILEY, C. V.] An entomologist caught napping. <Amer. Ent., December, 1869–January, 1870, v. 2, p. 84.

Criticism of the view that trees, grasses, or any other particular forms of vegetation are the natural coverings of the earth; this criticism applied especially to John Curtis.

1101. [RILEY, C. V.] Poisonous qualities of the Colorado potato-bug. <Amer. Ent., December, 1869–January, 1870, v. 2, pp. 85–86.

Extract from "Winona Republican," with remarks upon the poisonous nature of the blood of *Doryphora* 10-*lineata.*

1102. [RILEY, C. V.] Insects injurious to the grape-vine. No. 4. <Amer. Ent, December, 1869–January, 1870, v. 2, pp. 89–90, figs. 58–59. Reprint, with slight changes: <2d Ann. Rept. State Ent. Mo., March, 1870, pp. 76–78, figs. 52–53.

Treats of *Philampelus satellitia* [= *pandorus*]; see No. 1127 for synopsis of contents.

1103. [RILEY, C. V.] Toads *vs.* bugs. <Amer. Ent., December, 1869–January, 1870, v. 2, p. 91.

Translation of extracts from Fogt's "Noxious and beneficial animals;" existence of a commerce in toads between France and England; usefulness, tameness, and gratitude of toads.

1104. [RILEY, C. V.] The tomato-worm again. <Amer. Ent., December, 1869–January, 1870, v. 2, pp. 91–92.

Reprint, with comments, of article entitled "The tomato-worm," from Syracuse Standard; absurd nature of newspaper accounts of insects.

1105. [RILEY, C. V.] Mr. Walsh's successor. <Amer. Ent., December, 1869–January, 1870, v. 2, pp. 92–93.

Condition in which B. D. Walsh left the office of State Entomologist of Illinois at his death; plans of his intended second report; provisions for the preparation of the same and the filling of the office.

1106. [RILEY, C. V.] To our subscribers. <Amer. Ent., December, 1860–January, 1870, v. 2, p. 93.

Proposed change in the character of the American Entomologist.

1107. [RILEY, C. V.] The Walsh entomological collection. <Amer. Ent., December, 1869–January, 1870, v. 2, pp. 93–94.

Statement of the conditions under which the Walsh collection of insects is to be sold; expression of preferences in regard to its disposition; extent and method of preservation of the collection.

1108. [RILEY, C. V.] A State entomologist for Minnesota. <Amer. Ent., December, 1869–January, 1870, v. 2, p. 94.

Commendation of resolutions passed by the Minnesota State Horticultural Society recommending the appointment of a state entomologist; promotion of entomological studies by appropriations from the several States.

1109. RILEY, C. V. [Field for the entomologist in the South.] <Amer. Ent., v. 2, December, 1869–January, 1870, p. 94; February, 1870, p. 121.

Extent and novelty of entomological work in the southern United States; J. P. Stelle at work in this field.

1110. [RILEY, C. V.] On our table. <Amer. Ent., December, 1869–January, 1870, v. 2, pp. 95, 96.

Notices of J. T. C. Ratzeburg's works on "Forest trees" and "Weeds of Germany and Switzerland."

1111. [RILEY, C. V.] Information wanted. <Amer. Ent., December, 1869–January, 1870, v. 2, p. 96.

Answer to inquiry of M. A. Kendall; habits of *Xylocopa carolina* [=*virginica*], *Rhyssa* [=*Thalessa*] *lunator*, and *Spectrum* [=*Diapheromera*] *femorata*.

1112. [RILEY, C. V.] The Cecropia moth, *Attacus cecropia*, Linn. <Amer. Ent., February, 1870, v. 2, pp. 97–102, fig. 59 [bis]–67.

Descriptions and figures of larva, cocoon and imago of *Attacus cecropia*; figure of pupa; descriptions of egg and of young larva at its several stages; nomenclature, food-plants, and parasites; its value as a silk-worm; figures and descriptions of *Ophion macrurum*, *Exorista cecropiæ* n. sp., and *Chalcis* [=*Spilochalcis*] *mariæ* n. sp.; figure of larva of *Ophion macrurum* and of cocoons of *Cryptus nuncius*; habits of these parasites; *Exorista cecropiæ* considered a variety of *E. militaris* [=*Nemoræa leucaniæ*].

1113. RILEY, C. V. Report of the committee on entomology. Read . . . before the Missouri State Horticultural Society. <Amer. Ent., February, 1870, v. 2, pp. 106–109. Reprint: <2d Ann. Rept. State Ent. Mo., March, 1870, pp. 5–8, 13–15.

See No. 1127 for synopsis of contents.

1114. [RILEY, C. V.] Silk-worm eggs. <Amer. Ent., February, 1870, v. 2, p. 109.

Seventy-eight packages of silk-worm eggs, valued at $800 per package and weighing two tons, shipped from Yokohama to France via California and the Pacific Railroad.

1115. RILEY, C. V. Imported insects and native American insects. <Amer. Ent., February, 1870, v. 2, pp. 110–112, fig. 72–75. Reprint: <2d Ann. Rept. State Ent. Mo., March, 1870, pp. 8–12.

See No. 1127 for synopsis of contents.

1116. [RILEY, C. V.] The trumpet grape-gall, *Vitis viticola* O. S. <Amer. Ent., February, 1870, v. 2, pp. 113–114, fig. 76.

Figure of the gall of *Cecidomyia vitis-viticola.* *C. v.-lituus* a synonym; occurrence of similar gall in England on *Tilia* probably caused by mites.

1117. [RILEY, C. V.] The goat-weed butterfly, *Paphia glycerium* Doubleday. <Amer. Ent., February, 1870, v. 2, pp. 121–123, figs. 81–83. Reprint, with slight changes. <2d Ann. Rept. State Ent. Mo., March, 1870, pp. 124–128, figs. 94–96.

See No. 1127 for synopsis of contents.

1118. [RILEY, C. V.] Insects injurious to the grape-vine. No. 5. <Amer. Ent., February, 1870, v. 2, pp. 123–124, fig. 84. Reprint, with slight changes. <2d Ann. Rept. State Ent. Mo., March, 1870, pp. 78–79, fig. 54.

Treats of *Thyreus abbotii*; see No. 1127 for synopsis of contents.

1119. [RILEY, C. V.] Scorpion in Kansas. <Amer. Ent., February, 1870, v. 2, p. 126.

Answer to inquiry of K. Kelsey; occurrence of *Buthus carolinianus* in Texas, Missouri, and Kansas.

1120. [RILEY, C. V.] The grain Bruchus of Europe just imported. <Amer. Ent., February, 1870, v. 2, pp. 126–127, fig. 85.

Answer to inquiry of A. S. Fuller; notice of the recent importation into New York of the European *Bruchus granarius*; danger of and remedy for such importation; habits and ravages of and means against the beetle in Europe as described in J. Curtis's, "Farm Insects;" figure of the imago and of infested beans; figures of larva, pupa, and imago of *B. pisi* and of infested pea.

1121. [RILEY, C. V.] Locust borer. <Amer. Ent., February, 1870, v. 2, pp. 127–128, figs. 86–89.

Answer to inquiry of J. M. Shaffer; habits, food-plants, seasons, and ravages of and means against *Xyleutes* [= *Cossus*] *robiniæ*; figures larva, pupa, and male and female imagos.

1122. [Riley, C. V.] Eggs of snowy tree-cricket on raspberry canes. <Amer. Ent., February, 1870, v. 2, p. 128.

Answer to inquiry of J. B. Root; oviposition of and means against *Œcanthus niveus.*

1123. [Riley, C. V.] Spotted rove-beetle. <Amer. Ent., February, 1870, v. 2, p. 128.

Answer to inquiry of J. Huggins; habits of *Staphylinus maculosus* and of rove-beetles in general.

1124. [Riley, C. V.] Raspberry gouty gall. <Amer. Ent., February, 1870, v. 2, p. 128, fig. 90.

Answer to inquiry of C. Carpenter; ravages of and means against *Agrilus ruficollis*; description and figure of larva.

1125. [Riley, C. V.] Parasitic cocoons. <Amer. Ent., February, 1870, v. 2, p. 128, fig. 91.

Answer to inquiry of G. C. Brackett; figures cocoons and conjectures as to the habits of [*Microplitis ceratomiæ* var. *actuosus*].

1126. [Riley, C. V.] The pigeon Tremex in apple. <Amer. Ent., February, 1870, v. 2, p. 128.

Answer to inquiry of J. Huggins; habits and food-plants of *Tremex columba*; description of imago; *Rhyssa* [= *Thalessa*] *lunator* destroys the larva.

1127. Riley, C. V. Second annual report on the noxious, beneficial, and other insects of the State of Missouri, made to the State Board of Agriculture, pursuant to an appropriation for this purpose from the legislature of the State. <5th Ann. Rept. State Board of Agric. for 1869, March, 1870, pp. 136 + 6, 99 figs. Separate: <Jefferson City, Mo., March, 1870, pp. 136+6, 99 figs.

CONTENTS.

Preface 3

NOXIOUS INSECTS.

Report of the Committee on Entomology of the State Horticultural Society 5

Noxious insects less injurious in Missouri in 1869 than usual, 5—The army-worm and the grain plant-louse considerably injurious in Missouri in 1869, 5—The chinch-bug and the codling-moth less injurious, 6—A species of *Thrips* destroying great numbers of the Curculio, 6—Eggs of the apple-tree plant-louse destroyed by insect foes and birds, 6—According to Dr. Hull the "scab" in apples is caused by the apple-tree plant-louse, 7—The pickle-worm doing great damage during 1869, 7—Importance of preventing the introduction of injurious insects, 7—Cultivation causes insects to multiply unduly, 8—More attention paid in Europe to injurious insects than in this country, 8.

Imported insects and native American insects 8

The imported currant-worm much more injurious than the native, 8—Other instances showing the greater destructiveness of imported insect enemies than of their native representatives, 9—Almost all our worst insect pests and pernicious weeds have been introduced from Europe, 10—Few American insects and plants have become naturalized in Europe, 11—The American fauna and

1127. RILEY, C. V.—Continued.

flora not so highly improved and developed as in Europe, 12—Australian fauna still more "old-fashioned" than America, 12—The parasites of injurious insects are not imported with the insects themselves, 13—Government aid should be solicited to exterminate recently imported injurious insects, 13—But little attention given so far by our Government to assist the study of economic entomology, 14—Danger of introducing the oyster-shell bark-louse into Missouri, 15—Immunity of the Pacific States from many of our fruit insects, 15.

THE CHINCH-BUG,* *Blissus leucopterus* 15

It is the most injurious of all insects infesting grain, 16—Its past history, 17; it was known in South Carolina in Revolutionary times, 17; it was injurious in Missouri as early as 1854, 17; noticed in Illinois in 1840, 17; it was very injurious in Missouri in 1868, 17; but hardly noticed in 1869, 17—Probable reason why it was not noticed in Missouri in former times, 18—Why it is not injurious in Massachusetts and New York, 18—Its natural history, 18—The pupa state in the different insect orders, 18—Time required for different insects to complete the cycle of development, 19—The chinch-bug is two-brooded in Missouri, 19—Its winter quarters, 20—Its rapid multiplication, 20—Dr. Shimer's account of its nuptial flights, 21—It deposits the eggs underground on the roots of the plant, 21—The egg, 22—Dimorphous forms of the chinch-bug, 22—Its destructive powers, 22—Account of its appearance in immense numbers, 23—Heading off the marching bugs by a barrier of pine boards, 23—Heavy rains destructive to the chinch-bug, 24—Moisture injurious to the egg, 24—The chinch-bug is always worse in a dry season than in a wet one, 24—Dr. Shimer's theory on epidemic disease affecting the chinch-bug, 25—Cannibal foes of the chinch-bug, 25; several species of ladybirds, 25; the weeping lacewing, 26; how the lacewing larva seizes its prey, 26; the insidious flower-bug, 27; the common quail, 28—Amount of damage done by the chinch-bug, 28—Remedies, 28—Burning in winter the old corn-stalks and other dead stuff on and near the fields, 29—Mixing winter rye among spring wheat, 29—Intercepting the marching bugs by fence-boards, 29—Sowing gas-lime, 30—Other remedies, 30—Bogus chinch-bugs, 31—Several species of Heteroptera confounded with the true chinch-bug, 31—The smell emitted by the half-winged bugs, 32—The insidious flower-bug, 32—The ash-gray leaf-bug and its injury to grape-vines, 33—The flea-like negro-bug, 33; injury caused by it to raspberry, strawberry, and garden flowers, 34—Two other species of negro-bug, 35—Recapitulation of the natural history of the chinch-bug, 36.

THE ARMY-WORM, *Leucania unipuncta* 37

Four distinct caterpillars designated as army-worms in this country, 37.

The tent-caterpillar of the forest, *Clisiocampa disstria* 37

It can not properly be called an army-worm, 37.

The cotton-worm, *Aletia xylina* 37

Historical data on the injury caused by it, 38—The egg, 38—The worm and its habits, 39—Mr. Lyman's incorrect account of its development, 39—The moth and its habits, 40—Its hibernation, 40—Remedies, 41.

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* Extract in <Rept. State Board Agric., Kansas for 1873-'74, pp. 129-131.

1127. **Riley, C. V.**—Continued.

The Southern grass-worm, *Laphygma frugiperda* 41

It resembles in habits the veritable army-worm, 41.

The true army-worm 41

Its past history, 41—Rev. Powers's account of its invasion in the New England States in 1770, 42—Accounts of later invasions previous to 1861, 43—Years of its appearance in Illinois, 43—The invasion of the year 1861, 44—Its appearance in Missouri in 1869, 44—Its sudden appearance and disappearance, 45—Reason for the apparently sudden appearance, 45—Army-worm years are wet with the preceding year dry, 46—Reason for the increase and decrease of the number of worms, 46—Its natural history, 47—Previous accounts of its natural history, 47—When the eggs are laid, 47—Where they are laid, 48—Misdirected instinct in insects and birds, 48—Exceptions to the normal habit of the worm, 48—Color of the worm, 49—The chrysalis and imago, 49—Parasites, 50; the red-tailed Tachina-fly, 50; its beneficial work, 50; it infests also other insects, 50; Walsh's description of the fly, 51; it has been redescribed as *Exorista osten sackenii*, 51; the yellow-tailed Tachina-fly, 51; description of the fly, 51; the glassy Mesochorus, 52; the diminished Pezomachus, 52; the military Microgaster, 52; the purged Ophion, 53; the army-worm Ichneumon-fly, 53—Habits of the army-worm and suggestions for its destruction, 53—Burning grass meadows in winter or early spring, 54—Plowing late in the fall, 54—The marching of the worms, 54—Plants they prefer, 54—They become beneficial by devouring the chess in the fields, 55—Ditching, 55—Description of the insect as larva and imago, 56.

INSECTS INFESTING THE SWEET-POTATO 56

Tortoise-beetles 57

The clubbed tortoise-beetle affects the Irish potato, 56—Its general appearance, 57—Characteristics of tortoise-beetles, 57—Merdigerous habits of tortoise-beetles and others of the same family, 58—General appearance of the larvæ, 58—Their dung parasol, 59—Larval molts, 59—Egg of tortoise-beetles, 60—The chrysalis, 60—Habits of and injury done by the beetles, 60—Remedies, 61.

The two-striped sweet-potato beetle, *Cassida bivittata* 61

It seems to be confined to that plant, 61—The larva and the use of its fork, 61—Its pupa and imago, 61.

The golden tortoise-beetle, *Coptocycla aurichalcea* 62

Food-plants and characteristics of the larva, 62—Brilliant color of the beetle, 62.

The pale-thighed tortoise-beetle, *Coptocycla aurichalcea* 62

It is hardly distinguished from the foregoing species, 62.

The mottled tortoise-beetle, *Coptocycla guttata* 63

Characteristics of the beetle, 63; of the larva, 63.

The black-legged tortoise-beetle, *Cassida nigripes* 63

Characteristics of the imago and larva, 63.

THE PICKLE-WORM, *Eudioptis nitidalis* 64

Other insects infesting cucurbitaceous vines 64

The squash-borer, 64—It seems to be confined to the Eastern States, 64—The striped cucumber-beetle, 64—Injury done by the beetle, 64; by the larva, 65—The larva and pupa, 65—Number of annual generations, 65—Remedies, 66—Extent of the injury caused by it, 66—The 12-spotted Diabrotica, 66.

1127. RILEY, C. V.—Continued.

The pickle-worm 67

Characteristics and description of the worm, 67—Its habits, 67—Characteristics of the moth, 68—Accounts of injury done by the worm in Missouri and Illinois, 69; in other portions of the country, 70—It was not known before as injurious, 70—Remedy, 70.

INSECTS INJURIOUS TO THE GRAPE-VINE 71

The hog-caterpillar of the vine, *Ampelophaga myron* 71

The egg, 71—Characteristics of the larva, 71—Its habits when about to transform, 72—The chrysalis and imago, 72—It is one-brooded North and two-brooded farther South, 72—It is very injurious, 73—The Microgaster parasite and its development, 73—Habits of caterpillar infested with the parasite, 73.

The achemon Sphinx, *Philampelus achemon* 74

Appearance and habits of the larva, 74—The chrysalis, 75—The insect is single-brooded, 75—The moth and its issuing from the pupa-shell, 75—No parasites known, 76.

The satellite Sphinx, *Philampelus pandorus* 76

How to distinguish its larva from that of the foregoing species, 76—Development of the larva, 76—Variations in color of the larva, 77—Its position when at rest, 77—The moth, 78.

The Abbot Sphinx, *Thyreus abbotii* 78

Its distribution, 78—The larva varies much in color, 78—The chrysalis and imago, 79.

The blue caterpillars of the vine 79

The eight-spotted forester, *Alypia octomaculata*, 80—Larva previously mistaken for it, 80—Habits and characteristics of the larva, 80—Harris's description of the larva, 81—The moth, 81—Mr. Andrews's account of its ravages, 81—Remedies, 82.

The beautiful wood nymph, *Eudryas grata*, 83—Characteristics of the moth, 83—Close resemblance between the larva of this and the foregoing species, 83—The differences pointed out, 83—Development of the insect, 83.

The pearl wood nymph, *Eudryas unio*, 83—It greatly resembles the beautiful wood nymph, 83—Its probable larva, 84—Practical importance of distinguishing these closely allied species, 84.

The American Procris, *Harrisina americana* 85

Work of its larva, 85—Description of full-grown larva, 86—The moth, 86—It is not very destructive, 86—Two annual broods of the insects, 86—Parasite of the American Procris, 87.

The new grape-root borer, *Prionus laticollis* 87

Correction of opinion formerly expressed, 87.

The broad-necked Prionus, 87—Duration of the larva state, 87—Its transformation, 88—It bores also in apple roots, 88—Great damage done by the borer, 88—No good remedy known, 88.

The tile-horned Prionus, *Prionus imbricornis*, 89—How it differs from the foregoing, 89—Its occurrence on prairie land, 90—Small dimorphous male form, 90—The larva subsists also upon the roots of herbaceous plants, 90—Practical considerations, 91.

The grape-seed maggot, *Isosoma vitis* 92

The grape-seed Curculio larva of the first report is that of a hymenopterous insect, 92—The perfect insect is closely allied to the joint-worm fly, 92—Mr. Saunders' account and description of the imago, 93.

1127. RILEY, C. V.—Continued.

THE CANKER-WORM, *Paleacrita vernata*; *Anisopteryx pometaria* 94

The eggs, 94—The larva and larval changes, 95—Importance for the orchardists to recognize the true canker-worm, 95—The imported elm leaf-beetle mistaken for it, 95—Description of the larva, 96—Its food-plants, 96—The chrysalis, 96—Only one annual brood in the latitude of St. Louis, 97—The moth and its varieties, 97—It is less injurious in Missouri than in the Eastern States, 97—Remedies, 98—Classification of remedies proposed, 98—The trough and bandage systems, 99—Muriate of lime as remedy, 100—Jarring the tree, 101—Late fall plowing, 101—Summer plowing, 102—Efficiency of hogs, 102—Enemies, 102; birds, mites, and parasites, 102; ground-beetles, 103; the fraternal potter-wasp, 103.

CABBAGE-WORMS 104

The Southern cabbage butterfly, *Pieris protodice* 104

Its geographical range, 104—Injury caused by it in Missouri, 104—Description of the larva, 105—The chrysalis and imago, 105—Habits and other food-plants, 105.

The potherb butterfly, *Pieris olearacea*, 105—It is a Northern species, 105—It will very likely never occur in Missouri, 106—Geographical range of insects principally influenced by temperature, 106—Isentomic lines, 106—Southern insects found near St. Louis, 106.

The imported cabbage butterfly, *Pieris rapæ*, 106—Amount of damage caused by it in Canada, 107—Its spread westward, 107—It will undoubtedly spread to St. Louis, 107—The insect in Europe, 107—History of its introduction, 107—The insect in its different stages, 108—Its food, 108—Remedies, 109—Parasites, 109.

The cabbage Plusia, *Plusia brassicæ* 110

Characteristics and habits of the larva, 110—Its transformations, 111—Remedies, 111—Description of larva, chrysalis, and imago, 111—A similar worm occurring on thistles, 112.

The zebra caterpillar, *Mamestra picta* 112

Habits and characteristics of the larva, 112—The chrysalis and the moth, 113—Two annual broods, 113—Food-plants, 113.

THE TARNISHED PLANT-BUG, *Lygus pratensis* 113

Injury caused by it to various trees and plants, 114—It is a very variable species, 114—Its development, 114—No effective remedy known, 115—Preventive measures, 115.

THE PHILENOR SWALLOW-TAIL, *Papilio philenor* 116

Its food-plant, 116—Damage done by it, 116—Characteristics and development of the larva, 116—Description of the larva, 117—The pupa, 117—The imago, 117—Prevention, 118.

THE COTTONWOOD DAGGER, *Acronycta lepusculina* 119

General appearance of the larva, 119—Two annual broods, 119—Chrysalis and moth, 119—Larvæ of other species belonging to the genus *Acronycta*, 119—Parasites, 120—Description of larva and imago, 120—Characters and habits of other species of the same genus, 121.

THE MISSOURI BEE-KILLER, *Proctacanthus milbertii* 121

The true scientific name of the Nebraska bee-killer, 121—Wing-veins of the genera *Asilus*, *Promachus*, and *Erax*, 122—Description of the Missouri bee-killer, 122—How to destroy the flies, 123—Habits and life-history of Asilus-flies, 123—Description of larva and pupa of *Erax bastardi* (?), 124—Synonymical notes on the imago, 124.

1127. **Riley, C. V.**—Continued.

INNOXIOUS INSECTS.

THE GOAT-WEED BUTTERFLY, *Paphia glycerium* 125
Its geographical distribution and position in classification, 125—Its food-plant, 125—Habits of the larva, 126—Larval changes, 126—Conformity in the color of the larva with that of the leaves, 127—Description of the full-grown larva, 127—Transformation of the larva to chrysalis, 127—The two sexes of the imago, 127—Hibernation, 128.

THE BLACK BREEZE-FLY, *Tabanus atratus* 128
Breeze-flies beneficial in the larva state, 128—Tormenting power of breeze-flies, 128—Their mode of flight, 129—Our knowledge of their larval character and habits, 129—General characters of the larva of the black breeze-fly, 129—It is semi-aquatic, 129—Walsh's description of the larva, 130—Habits and food of the larva, 130—Its transformations, 131—Description of the pupa, 131—Probable habits of breeze-fly larvæ on the Western prairies, 132.

GALLS MADE BY MOTHS 132

THE FALSE INDIGO GALL-MOTH, *walshia amorphella* 132
The gall and its structure, 132—General appearance of the larva and the moth, 133—Description of larva and imago, 133.

THE MISNAMED GALL-MOTH, *Euryptychia saligneana* 134
Is it a true gall-maker or an inquiline ?, 134—Walsh's description of the larva, 134—Description of the imago, 134—Generic characters, 134—Reasons why the insect is an intruder and not a gall-maker, 134—Enumeration of the known gall-making moths, 135—How the gall is formed, 135.

1128. [**Riley, C. V.**] Mr. Walsh's portrait. <Amer. Ent., March, 1870, v. 2, p. 129.

Remarks accompanying the portrait of B. D. Walsh; resolutions passed on the death of Walsh by the London branch of the Entomological Society of Ontario; by the American Entomological Society, the Illinois State Horticultural Society, and by the Kansas State Horticultural Society.

1129. **Riley, C. V.** The plum Curculio, *Conotrachelus nenuphar* Herbst. <Amer. Ent., March, 1870, v. 2, pp. 130–137, fig. 92.

Paper read before the Illinois State Horticultural Society at its 14th annual meeting; summary of established facts and discussion of mooted points in the life-history of *Conotrachelus nenuphar*; seasons, habits, transformations, food-plants, enemies of and means against the same; descriptions and figures of larva and imago; figure of pupa; hibernation and the effects of climate on the prolongation of the life of insects.

1130. **Riley, C. V.** Insects injurious to the grape-vine. No. 6. <Amer. Ent., March, 1870, v. 2, pp. 150–153, figs. 100–102. Reprint, with slight changes: <2d Ann. Rept. State Ent. Mo., March, 1870, pp. 80–82, fig. 55.

Treats of *Alypia octomaculata*; see No. 1127 for synopsis of contents.

1131. [RILEY, C. V.] Pithy blackberry gall. <Amer. Ent., March, 1870, v. 2, pp. 159–160, fig. 103.

Answer to inquiry of C. W. ["S. C."] Spaulding; descriptions and figures of larva and gall of *Diastrophus nebulosus*; figure of pupa; seasons, food-plant, guest-fly [*Periclistus sylvestris*], and parasite [*Eurytoma diastrophi*] and means against this species; the genus *Diastrophus* confined to *Rosaceæ*, *Cynips* to *Cupuliferæ* and *Antistrophus* to *Compositæ*.

1132. [RILEY, C. V.] Clover-worms. <Amer. Ent., March, 1870, v. 2, p. 160.

Answer to inquiry of G. Pauls; geographical distribution, food-habits, vernacular names and synonymy of and means against *Asopia costalis*.

1133. [RILEY, C. V.] Seed-ticks under bark of apple-trees. <Amer. Ent., March, 1870, v. 2, p. 160.

Answer to inquiry of O. B. Galusha; character of insects as regards the number of legs; occurrence of *Ixodes unipunctata* under outer bark of apple-trees at Morris, Ill.

1134. [RILEY, C. V.] Parasitic cocoons. <Amer. Ent., March, 1870, v. 2, p. 160.

Answer to inquiry of S. W. Beckworth; occurrence of a mass of cocoons of [*Microplitis ceratomiæ* var. *actuosus*] under red-oak at South Pass, Ill.

1135. [RILEY, C. V.] Is any knowledge useless? <Amer. Ent. and Bot., April, 1870, v. 2, pp. 164–166.

Reprint of article from Manufacturer and Builder, November, 1869; minute investigations in science may be of great practical importance; cases in which a knowledge of life-history of *Galeruca calmariensis* [=*xanthomelæna*], *Conotrachelus nenuphar*, and *Lymexylon navale* was or might have been of great value.

1136. [RILEY, C. V.] Tomato fruit-worm. <Amer. Ent. and Bot., April, 1870, v. 2, p. 172.

Notice of statement by J. J. Weir that *Heliothis armigera* was bred from larvæ which fed on the fruit of tomato in England; food-plants of this insect.

1137. RILEY, C. V. Insects injurious to the grape-vine. No. 7. <Amer. Ent. and Bot., April, 1870, v. 2, pp. 173–174, figs. 107–108. Reprinted, with slight changes, from <2d Ann. Rept. State Ent. Mo., March, 1870, pp. 85–87, figs. 58–59.

Treats of *Procris* [=*Harrisina*] *americana*; see No. 1127 for synopsis of contents.

1138. [RILEY, C. V.] The death web of young trout. <Amer. Ent. and Bot., April, 1870, v. 2, p. 174.

Reprint, with review, of Seth Green's "An enemy to young trout;" young trout and young white-fish killed by the web of an unknown aquatic larva, probably one of the caddis-flies; habits of the larvæ of *Phryganeidæ*. See No. 1160.

1139. [RILEY, C. V.] "Scab" in apple *v.* apple-tree plant-lice. <Amer. Ent. and Bot., April, 1870, v. 2, p. 178.

Notes the freedom of apple-trees in 1870 from the eggs of *Aphis mali*, and the opportunity to test the question of the connection of these insects with the "scab."

1140. [Riley, C. V.] Insects named. <Amer. Ent. and Bot., April, 1870, v. 2, p. 179.

Answer to inquiry of M. Hobart; identification of several insects; food-plants of *Grapta comma*, *Geometra* [=*Zerene*] *catenaria*, *Serica vespertina*, and *Tetraopes* 5-*maculatus*; geographical distribution of *Grapta comma*; description of larva of *Ecpantheria scribonia*.

1141. [Riley, C. V.] Supposed trout enemy. <Amer. Ent. and Bot., April, 1870, v. 2, pp. 179–180.

Answer to inquiry of F. Mather; identification of several insects; habits and occurrence of *Capnia minima*; occurrence of *Piophila casei* and *Ptinus brunneus* at Honeoye Falls, N. Y.

1142. [Riley, C. V.] Food for trout. <Amer. Ent. and Bot., April, 1870, v. 2, p. 180.

Answer to inquiry of Seth Green and Collins; with knowledge of the character of the worms which forms a desirable food for young trout, it may be possible to suggest some method of propagating the worms artificially.

1143. [Riley, C. V.] Hair-snakes. <Amer. Ent. and Bot., April, 1870, v. 2, p. 180.

Answer to inquiry of E. W. M.; parasitic habits, abodes and prolificacy, and classificatory relations of *Gordius varius* and *G. aquaticus*.

1144. [Riley, C. V.] Egg-sack of some unknown spider. <Amer. Ent. and Bot., April, 1870, v. 2, p. 180.

Answer to inquiry of A. Engelmann; figure of egg-sack of *Epeira* sp.?

1145. [Riley, C. V.] Do worker bees sting the drones to death? <Amer. Ent. and Bot., April, 1870, v. 2, p. 180.

Answer to inquiry of M. W. V.; there is no good reason to doubt that worker bees sting the drones to death when the mission of the latter is ended.

1146. [Riley, C. V.] Red spider. <Amer. Ent. and Bot., April, 1870, v. 2, p. 180.

Answer to inquiry of R. H. Warder; *Trombidium* [=*Tetranychus*] *telarius* imported from Europe; size, color, and abodes of and means against the same.

1147. [Riley, C. V.] Insect named. <Amer. Ent. and Bot., April, 1870, v. 2, p. 180.

Answer to inquiry of M. Barrett; food-habits of *Psocus venosus* and other *Psocidæ*.

1148. [Riley, C. V.] To destroy plant-lice. <Amer. Ent. and Bot., April, 1870, v. 2, p. 180.

Answer to inquiry of B. F. Lazear; means against *Aphididæ* on house plants.

1149. [Riley, C. V.] Raspberry root-gall. <Amer. Ent. and Bot., April, 1870, v. 2, p. 181, fig. 110.

Answer to inquiry of K. Parsons; description and figure of gall of *Rhodites radicum* occurring on roots of *Rosaceæ*; genera of parasites raised from it; interest of the question of the manner and extent of parasitization of this gall.

1150. [Riley, C. V.] Spined slug-worm. <Amer. Ent. and Bot., April, 1870, v. 2, p. 181.

Answer to inquiry of L. G. Saffer and A. R. Bodley; brief description of the larva of *Limacodes* sp.

1151. [RILEY, C. V.] Apple-tree insects. <Amer. Ent. and Bot., April, 1870, v. 2, p. 181.

Answer to inquiry of L. Camfield; identification of specimens and directions for the destruction of *Orgyia leucostigma* and *Phycita nebulo* [= *Acrobasis indiginella*].

1152. [RILEY, C. V.] Native apple-tree bark-lice. <Amer. Ent. and Bot., April, 1870, v. 2, p. 181, fig. 111.

Answer to inquiry of A. C. Hammond; food-plants of and means against *Diaspis harrisii* [= *Chionaspis furfurus*]; figure of infested twig of apple; the presence of enemies and parasites prevent this species becoming a formidable pest.

1153. [RILEY, C. V.] The hedge-hog caterpillar. <Amer. Ent. and Bot., April, 1870, v. 2, p. 182, fig. 112.

Answer to inquiry of H. Burt; descriptions and figures of larva and imago of *Arctia* [= *Pyrrharctia*] *isabella*; figure of pupa and cocoon; habits and hibernation; its larva and that of *Ecpantheria scribonia* called "fever-worm," and ignorantly supposed to cause malarial fevers; food-habits of *Horinus* [= *Merinus*] *lævis*.

1154. [RILEY, C. V.] Chick-weed Geometer. <Amer. Ent. and Bot., April, 1870, v. 2, p. 182.

Answer to inquiry of J. Huggins; identification of specimens; reference to account of *Hæmatopis grataria*; *Cermatia forceps* common in houses in the latitude of St. Louis, Mo.; the sulphur remedy for canker-worms absurd.

1155. [RILEY, C. V.] Bean-weevil. <Amer. Ent. and Bot., April, 1870, v. 2, p. 182.

Answer to inquiry of G. W. Copley; specimens identified; occurrence and ravages of *Bruchus obsoletus* in Illinois.

1156. [RILEY, C. V.] Bag-worm at South Pass, Ill. <Amer. Ent. and Bot., April, 1870, v. 2, p. 182.

Answer to inquiry of G. H. Baker; occurrence of *Thyridopteryx ephemeræformis* at South Pass, Ill.; importance of its destruction.

1157. [RILEY, C. V.] Eggs of oblong-winged katy-did. <Amer. Ent. and Bot., April, 1870, v. 2, p. 182.

Answer to inquiry of E. D. Ladd; differences between the eggs of *Phylloptera* [= *Amblycorypha*] *oblongifolia* and those of *Platyphyllum* [= *Cyrtophyllus*] *concavus*; the former occur on currant and various trees.

1158. [RILEY, C. V.] Insects injurious to the grape-vine. No. 8. <Amer. Ent. and Bot., May, 1870, v. 2, pp. 208–209, fig. 127. Reprint, with slight changes: <3d Ann. Rept. State Ent. Mo., April, 1871, pp. 61–63, fig. 24.

Treats of *Desmia maculalis*; see No. 1301 for synopsis of contents.

1159. [RILEY, C. V.] The periodical Cicada alias the 17-year and 13-year locust. <Amer. Ent. and Bot., May, 1870, p. 211.

Quotes, from the 1st Ann. Rept. State Ent. Mo., the localities in which *Cicada* [= *Tibicen*] *septendecim* and *C.* [= *T.*] *tredecim* will appear in 1870, with request for reports of the occurrence of these insects.

1160. [RILEY, C. V.] The death-web of young trout. <Amer. Ent. and Bot., May, 1870, v. 2, p. 211.

Supplementary to No. 1138; the larvæ mentioned belong to the genus *Simulium*.

1161. [RILEY, C. V.] Worms under mulch hay. <Amer. Ent. and Bot., May, 1870, v. 2, p. 212.

Answer to inquiry of J. F. Flagg; description, season, habits, and ravages of and means against the larvæ of *Tipula* sp.

1162. [RILEY, C. V.] A new pear-tree insect. <Amer. Ent. and Bot., May, 1870, v. 2, p. 212, fig. 129.

Answer to inquiry of E. J. Ayres; food-habits and ravages of and means against *Platycerus quercus*; figure of imago.

1163. [RILEY, C. V.] Apple-twig borer. <Amer. Ent. and Bot., May, 1870, v. 2, p. 212.

Answer to inquiry of J. B. Myers; *Bostrichus* [=*Amphicerus*] *bicaudatus* bores into the axil of limbs of pear-trees.

1164. [RILEY, C. V.] Cocoons of polyphemus moth. <Amer. Ent. and Bot., May, 1870, v. 2, 212.

Answer to inquiry of H. J. Dunlap; cocoon of *Attacus* [=*Telea*] *polyphemus* found on Morello cherry-tree.

1165. [RILEY, C. V.] Galls on supposed dock. <Amer. Ent. and Bot., May, 1870, v. 2, p. 212.

Answer to inquiry of S. V. Summers; *Gelechia gallæ-solidaginis* forms galls on stems of *Solidago*; *Gastrophysa* [=*Gastroidea*] *cyanea* breeds on *Rumex*.

1166. [RILEY, C. V.] Mossy rose-gall. <Amer. Ent. and Bot., May, 1870, v. 2, p. 213, fig. 130.

Answer to inquiry of W. M. Locke; description of gall, larva, and imago of *Rhodites rosæ*; figure of the gall; description of a parasitic larva.

1167. [RILEY, C. V.] Punctures on the rose-twig. <Amer. Ent. and Bot., May, 1870, v. 2, p. 213, fig. 131.

Answer to inquiry of G. W. Copley; punctures in rose-stem; eggs, probably of a cricket, imbedded in pith of the same; description of the egg and figure of injured stem.

1168. [RILEY, C. V.] Snout-beetle. <Amer. Ent. and Bot., May, 1870, v. 2, p. 213.

Answer to inquiry of Mary Treat; *Hylobius confusus* a timber borer and usually in pine.

1169. [RILEY, C. V.] The oyster-shell bark-louse in Missouri. <Amer. Ent. and Bot., May, 1870, v. 2, pp. 213–214, fig. 132.

Answer to inquiry of B. P. Hanan; occurrence of *Aspidiotus conchiformis* [=*Mytilaspis pomorum*] in Missouri; importance of the thorough extirpation of the insect; figure of a piece of bark infested by the same.

1170. [RILEY, C. V.] The pod-like willow-gall. <Amer. Ent. and Bot., May, 1870, v. 2, p. 214, fig. 133.

Answer to inquiry of J. R. Muhleman; description and figure of the gall of *Cecidomyia salicis-siliqua*; figure of larva; food-plants, synonymy, and description of the pupa of the same.

1171. [RILEY, C. V.] Bee-nest. <Amer. Ent. and Bot., 1870, v. 2; May, p. 214, fig. 134; September, p. 307.

Answer to inquiry of J. R. Muhleman; description and figure of larva of *Prosopis affinis* in hot, low currant-stem; probability that *Ceratina dupla* breeds twice a year.

1172. [RILEY, C. V.] Beetles named. <Amer. Ent. and Bot., May, 1870, v. 2, p. 214.

Answer to inquiry of S. V. Summers; specimens identified; difference between *Canthon lævis* and *C. chalcites*.

1173. [RILEY, C. V.] Great discovery: Curculio extermination possible! <Amer. Ent. and Bot., June, 1870, v. 2, pp. 225–227. Notice: <Cultivator and Country Gentleman, 9 June, 1870, v. 35, p. 361.

Reprint of articles by J. E. Chamberlain and Mrs. H. Wier on the destruction of the Curculio; letter from W. B. Ransom; criticism of the same; means against *Conotrachelus nenuphar*; distinctions between *C. nenuphar* and *Anthonomus quadrigibbus*.

1174. [RILEY, C. V.] The death-web of young trout. <Amer. Ent. and Bot., June, 1870, v. 2, pp. 227–228, figs. 143–144.

Value and progress of fish-culture; habits of *Simulium piscicidium*, with the observations of Seth Green and Sara J. McBride; figures larva and pupa of *S. piscicidium* and the imago of *S. molestum*.

1175. [RILEY, C. V.] Insects injurious to the grape-vine. No. 9. <Amer. Ent. and Bot., June, 1870, v. 2, pp. 234–235, fig. 148. Reprint, with slight changes: <3d Ann. Rept. State Ent. Mo., April, 1871, pp. 65–68, fig. 27.

Treats of *Pterophorus* [= *Oxyptilus*] *periscelidactylus*; see No. 1301 for synopsis of contents.

1176. [RILEY, C. V.] The apple Curculio. <Amer. Ent. and Bot., June, 1870, v. 2, p. 243, fig. 152.

Figures of the imago of *Anthonomus quadrigibbus*.

1177. [RILEY, C. V.] The new Curculio remedy. <Amer. Ent. and Bot., June, 1870, v. 2, p. 243.

Results of experiments in the use of Ransom chip-trap for *Conotrachelus nenuphar*.

1178. [RILEY, C. V.] Tarantula of Texas. <Amer. Ent. and Bot., June, 1870, v. 2, p. 244.

Answer to inquiry of L. J. Stroop; the figure of *Mygale hentzii* given in volume one is somewhat incorrect.

1179. [RILEY, C. V.] Ailanthus silk-worm naturalized. <Amer. Ent. and Bot., June, 1870, v. 2, p. 244.

Answer to inquiry of A. S. Fuller; introduction and naturalization of *Attacus cynthia*.

1180. [RILEY, C. V.] Cypress-gall. <Amer. Ent. and Bot., June, 1870, v. 2, p. 244, fig. 153.

Answer to inquiry of J. P. Stelle; description and figures of gall and description of gall and imago of *Cecidomyia cupressi-ananassa* n. sp. on cypress; figures breast-bone of the larva.

1181. [RILEY, C. V.] Tent-caterpillar of the forest. <Amer. Ent. and Bot., June, 1870, v. 2, p. 245.

Answer to the inquiries of A. M. Brown and J. H. Evans; habits, food-plants, and ravages of *Clisiocampa sylvatica* [=*disstria*] and *C. americana*.

1182. [Riley, C. V.] Worm-boring into peach. <Amer. Ent. and Bot., June, 1870, v. 2, p. 245.

Answer to inquiries of W. C. Flagg, A. C. Hammond, and M. M. Hooton; food-plants and description of larva of *Xylina cinerea* [=*Lithophane antennata*].

1183. [Riley, C. V.] Insects named. <Amer. Ent. and Bot., June, 1870, v. 2, p. 245.

Answer to inquiry of A. Engelman; descriptions of *Smilia auriculata* and *Membracis ampelopsidis*; both species common on grape-vines.

1184. [Riley, C. V.] Lice on "snow-balls. <Amer. Ent. and Bot., June, 1870, v. 2, p. 245.

Answer to inquiry of Mrs. C. L. Seymour; means against *Aphididæ.*

1185. [Riley, C. V.] Twig-borer. <Amer. Ent. and Bot., June, 1870, v. 2 p. 245, fig. 154.

Answer to inquiries of S. H. Kriedelbaugh and G. F. Merriam; figures of male and female *Bostrichus* [=*Amphicerus*] *bicaudatus,* which bore into the axils of grape-buds.

1186. [Riley, C. V.] Bee enemy. <Amer. Ent. and Bot., June, 1870, v. 2, p. 245.

Answer to inquiry of F. Brewer; *Staphylinus maculosus,* found eating a bee, is rather a scavenger than an insect of prey.

1187. [Riley, C. V.] Knots on apple-tree roots caused by root-lice. <Amer. Ent. and Bot., June, 1870, v. 2, p. 246.

Answer to inquiry of B. N. McKinstry; ravages of and means against *Schizoneura lanigera* on roots of young apple-trees.

1188. [Riley, C. V.] Beetles named. <Amer. Ent. and Bot., June, 1870, v. 2, p. 246.

Answer to inquiry of W. W. Daniells; *Ithycerus noveboracensis* injures apple-leaves.

1189. [Riley, C. V.] Bag-worm. <Amer. Ent. and Bot., June, 1870, v. 2, p. 246.

Answer to inquiry of M. M. Hooten; occurrence of young larva of *Thyridopteryx ephemeræformis* on peach-trees; manner in which they carry their cases.

1190. [Riley, C. V.] The larder-beetle. <Amer. Ent. and Bot., June, 1870, v. 2, p. 246.

Answer to inquiry of S. H. Kriedelbaugh; food-habits and description of the larva and imago of *Dermestes lardarius.*

1191. [Riley, C. V.] Water-bug. <Amer. Ent. and Bot., June, 1870, v. 2, p. 246.

Answer to inquiry of W. H. Harrington; habits and description of *Ranatra fusca.*

1192. [Riley, C. V.] Gregarious worms on horse-chestnut. <Amer. Ent. and Bot., June, 1870, v. 2, p. 246.

Answer to inquiry of W. R. Howard; oviposition, food-plant, and parasite of *Tortrix* [= *Cacoecia*] *rileyana.*

1193. [Riley, C. V.] Pupa of the disippus butterfly. <Amer. Ent. and Bot., June, 1870, v. 2, p. 246, fig. 155.

Answer to inquiry of T. Montgomery; figure and colors of pupa of *Limenitis disippus*; food-plants and hibernations of larva.

1194. [RILEY, C. V.] Prickly-rose gall. <Amer. Ent. and Bot., June, 1870, v. 2, p. 246.

Answer to inquiry of J. Cochrane and J. P. Stelle; brief description of the gall of *Rhodites bicolor* on wild rose.

1195. [RILEY, C. V.] Insects feeding on sap of black-walnut. <Amer. Ent. and Bot., June, 1870, v. 2, p. 246.

Answer to inquiry of M. Barrett; food-habits of *Psocus venosus.*

1196. [RILEY, C. V.] Locust-borer. <Amer. Ent. and Bot., June, 1870, v. 2, p. 246.

Answer to inquiry of "Arbor;" means against *Arhopalus* [= *Cyllene*] *robiniæ*.

1197. [RILEY, C. V.] To exterminate cockroaches. <Amer. Ent. and Bot., June, 1870, v. 2, p. 246.

Answer to inquiry of R. F. Weitbree; means against cockroaches.

1198. [RILEY, C. V.] The white-lined morning Sphinx. (*Deilephila lineata*, Fabr.) <Amer. Ent. and Bot., July–August, 1870, v. 2, pp. 257–258, figs. 162–164. Reprint, with additions and slight changes: <3d Ann. Rept. State Ent. Mo., April, 1871, pp. 140–142, figs. 60–62.

Treats of *Deilephila lineata*; see No. 1301 for synopsis of contents.

1199. [RILEY, C. V.] Descriptive entomology. <Amer. Ent. and Bot., July–August, 1870, v. 2, pp. 258–261. Abstract: <Cultivator and Country Gentleman, 6 April, 1871, v. 36, p. 218.

Critical review of a remark by J A. Lintner; calculation of the cost, labor, and extent of a work containing the description and figure of every existing species of insect.

1200. [RILEY, C. V.] The tent-caterpillar of the forest. (*Clisiocampa sylvatica*, Harr.) <Amer. Ent. and Bot., July–August, 1870, v. 2, pp. 261–266, figs. 165–168. Reprint, with additions and slight changes: <3d Ann. Rept. State Ent. Mo., April, 1871, pp. 121–129, figs. 52–54.

Treats of *Clisiocampa sylvatica* [= *disstria*]; see No. 1301 for synopsis of contents.

1201. [RILEY, C. V.] The Ransom Curculio remedy. <Amer. Ent. and Bot., July–August, 1870, v. 2, pp. 268–271.

Discussion of the efficacy of the Ransom chip-trap against *Conotrachelus nenuphar*; extracts from and criticism of articles by E. S. Hull, W. B. Ransom, and others on this subject.

1202. [RILEY, C. V.] Insects injurious to the grape-vine. No. 10. <Amer. Ent. and Bot., July–August, 1870, v. 2, pp. 272–273, fig. 170. Reprint, with additions and slight changes. <3d Ann. Rept. State Ent. Mo., April, 1871, pp. 68–69, fig. 28.

Treats of *Spilosoma virginica*; see No. 1301 for synopsis of contents.

1203. [RILEY, C. V.] The Walsh entomological cabinet. <Amer. Ent. and Bot., July–August, 1870, v. 2, p. 275.

Remarks on the purchase and disposal of the entomological collection of B. D. Walsh.

1204. [RILEY, C. V.] The currant-worm! <Amer. Ent. and Bot., July–August, 1870, v. 2, p. 275.

Comments upon the confusing way in which some horticultural publications treat of *the* currant-worm, without discrimination of species.

1205. [RILEY, C. V.] Water larva. <Amer. Ent. and Bot., July–August, 1870, v. 2, p. 275.

Answer to inquiry of F. Mather; habits of the larvæ of *Ephemeridæ.*

1206. [RILEY, C. V.] Large black potato-beetles. <Amer. Ent. and Bot., July–August, 1870, v. 2, p. 275.

Answer to inquiry of R. S. Elliott; *Epicauta corvina?* injuring potato-vines in Kansas.

1207. [RILEY, C. V.] Destroying cherry plant-lice. <Amer. Ent. and Bot., July–August, 1870, v. 2, p. 275.

Answer to inquiry of G. C. Brackett; means against *Myzus cerasi.*

1208. [RILEY, C. V.] Caterpillars on grape-vines. <Amer. Ent. and Bot., July–August, 1870, v. 2, p. 275.

Answer to inquiry of G. A. Watson; larvæ of *Alypia octomaculata* and *Acronycta oblinita* found on grape-vines; food-plants of the latter species.

1209. [RILEY, C. V.] Ash-gray blister-beetle. <Amer. Ent. and Bot., July–August, 1870, v. 2, p. 275.

Answer to inquiry of P. H. Foster; *Lytta cinerea* [=*Macrobasis unicolor*] feeding on the three-thorned Acacia.

1210. [RILEY, C. V.] Specimens lost. <Amer. Ent. and Bot., July–August, 1870, v. 2, p. 276.

Answer to inquiry of C. H. Roberts; food-habits and description of larva of *Gortyna nitela* and of an undetermined moth on peach-trees.

1211. [RILEY, C. V.] White willow worm. <Amer. Ent. and Bot., July–August, 1870, v. 2, p. 276.

Answer to inquiry of S. H. K.; food-plants and description of larva of and means against *Nematus ventralis.*

1212. [RILEY, C. V.] Bark-lice on grape-vine and raspberry saw-fly. <Amer. Ent. and Bot., July–August, 1870, v. 2, p. 276.

Answer to inquiry of S. Thompson; *Lecanium* [=*Pulvinaria*] *vitis* common on grape-vines in Europe and North America; its oviposition and occurrence in Illinois; description and means against the larva of *Selandria* [=*Monophadnus*] *rubi.*

1213. [RILEY, C. V.] Apple-tree borer; variations in the two-striped Saperda. <Amer. Ent. and Bot., July–August, 1870, v. 2, p. 276.

Answer to inquiry of D. B. Wier; colorational variations in *Saperda bivittata* [=*candida*]; abundance and ravages of *Capsus oblineatus* [=*Lygus pratensis*].

1214. [RILEY, C. V.] The plum Curculio breeds in apple. <Amer. Ent. and Bot., July–August, 1870, v. 2, p. 276.

Answer inquiry of E. Leming; *Conotrachelus nenuphar* breeds in the fruit of apple.

1215. [RILEY, C. V.] Cecropia worm. <Amer. Ent. and Bot., July–August, 1870, v. 2, p. 276.

Answer to inquiry of J. F. Thompson; occurrence and ravages of the larva of *Attacus cecropia* on apple-trees.

1216. [RILEY, C. V.] Gigantic rhinoceros beetle. <Amer. Ent. and Bot., July–August, 1870, v. 2, p. 276.

Answer to inquiry of L. G. Saffer; variations in coloration of *Dynastes tityus.*

1217. [RILEY, C. V.] Roman-nosed pupa. <Amer. Ent. and Bot., July–August, 1870, v. 2, p. 276.

Answer to inquiry of E. D. Van Winkle; food-habits of *Limenitis ursula* and *L. disippus*; the pupæ of the two species are alike.

1218. [RILEY, C. V.] The onward march of the Colorado potato-beetle. A word to our Canadian neighbors. <Amer. Ent. and Bot., September, 1870, v. 2, pp. 289–291, fig. 181.

Remarks on the spread of *Doryphora decemlineata* into Ontario, and means of checking it; efficacy and proper use of Paris green; other remedies; *Lebia grandis* a natural enemy of the larvæ.

1219. [RILEY, C. V.] The tarnished plant-bug. (*Capsus oblineatus*, Say). <Amer. Ent. and Bot., September, 1870, v. 2, pp. 291–293, fig. 182. Reprinted, with additions and slight changes, from <2d Ann. Rept. State Ent. Mo., March, 1870, pp. 113–115, fig. 83.

Treats of *Capsus oblineatus* [=*Lygus pratensis*]; see No. 1127 for synopsis of contents.

1220. [RILEY, C. V.] Osage orange for the mulberry silk-worm. <Amer. Ent. and Bot., September, 1870, v. 2, p. 293.

Reprint and critical review of S. Cornaby's article on the above; important articles should not be published anonymously.

1221. [RILEY, C. V.] Insects injurious to the grape-vine. No. 11. <Amer. Ent. and Bot., September, 1870, v. 2, p. 295, fig. 185. Reprint with slight changes. <3d Ann. Rept. State Ent. Mo., April, 1871, pp. 77–79, fig. 34.

Treats of *Pelidnota punctata*; see No. 1301 for synopsis of contents.

1222. [RILEY, C. V.] The slug on pear and cherry trees. <Amer. Ent. and Bot., September, 1870, v. 2, p. 296.

Reprint and critical review of "Addi" on the above; ravages of and means against *Selandria* [=*Eriocampa*] *cerasi.*

1223. [RILEY, C. V.] Appendix to joint-worm article published in vol. 1, No. 8 <Amer. Ent. and Bot., September, 1870, v. 2, pp. 296–297.

Introduction to and explanation of the preparation and publication of Walsh's *Eurytomides.* See No. 384.

1224. [RILEY, C. V.] Entomology indeed run mad! <Amer. Ent. and Bot., September, 1870, v. 2, p. 305.

Critical review of Mark Miller's article on the currant-worm; *Nematus ventricosus* [=*ribesii*] confounded with *Eufitchia ribearia.*

1225. [RILEY, C. V.] Red spider. <Amer. Ent. and Bot., September, 1870, v. 2, p. 305.

Ravages and transformations of *Tetranychus telarius.*

1226. [RILEY, C. V.] Insects named. <Amer. Ent. and Bot., September, 1870, v. 2, p. 306.

Answer to inquiry of J. K. Kidd; food-habits of *Silpha peltata* [=*americana*] and allied forms, of *Calosoma scrutator* and of *Laphria* [=*Dasyllis*] *thoracica*; mimicry between *Laphria* and *Bombus* and its use.

1227. [RILEY, C. V.] Caterpillar of white-marked tussock moth. <Amer. Ent. and Bot., September, 1870, v. 2, p. 306, fig. 186.

Answer to inquiry of G. C. Brackett; figure of larva and description of imago of *Orgyia leucostigma*; posture of male in repose; habits of female; *Saperda bivittata* [=*candida*] usually perishes if it has not changed to a pupa before the death of the tree; *Chrysobothris femorata* lives for weeks on dead wood.

1228. [RILEY, C. V.] Does the apple Curculio go underground to transform? <Amer. Ent. and Bot., September, 1870, v. 2, p. 306.

Answer to inquiry of W. Muir; *Anthonomus quadrigibbus* transforms within the fruit; it does not attack stone fruit.

1229. [RILEY, C. V.] Walnut caterpillars. <Amer. Ent. and Bot., September, 1870, v. 2, p. 306.

Answer to inquiry of G. M. Levette; seasons, habits, and food-plant of and means against *Datana ministra*; description of larva.

1230. [RILEY, C. V.] Striped blister-beetle. <Amer. Ent. and Bot., September, 1870, v. 2, p. 306, fig. 187.

Answer to inquiry of A. Galt; means against *Epicauta vittata* and other *Meloidæ* on potato vines; figure of *Epicauta vittata*.

1231. [RILEY, C. V.] Grape-vine Fidia. <Amer. Ent. and Bot., September, 1870, v. 2, p. 307, fig. 188.

Answer to inquiry of J. Hetzel; habits, ravages, and food-plants of and means against *Fidia viticida*; figure of this species.

1232. [RILEY, C. V.] Some interesting insects. <Amer. Ent. and Bot., September, 1870, v. 2, p. 307.

Answer to inquiry of A. S. Fuller; ravages of *Bruchus obsoletus* in Lima beans; of *Butalis cerealella* in flint corn in stems and of *Lobesia* [=*Eudemis*] *botrana* in blossoms of blackberry; description of the larva case of *Phycita nebulo* [=*Acrobasis indiginella*] and of galls of *Cecidomyia tubicola* on *Carya*.

1233. [RILEY, C. V.] The green hag-moth. <Amer. Ent. and Bot., September, 1870, v. 2, p. 307.

Answer to inquiry of S. B. Shaw; food-plants, and synonymy of *Callochlora viridis* [=*Parasa chloris*]; description of larva and imago; the larva described by Reakirt does not belong to this species.

1234. [RILEY, C. V.] The antiopa butterfly. <Amer. Ent. and Bot., September, 1870, v. 2, p. 307.

Answer to inquiry of A. S. Moss; description of larva and imago of *Vanessa antiopa*; the larva feeds on willow; vernacular name and comparative abundance.

1235. [RILEY, C. V.] Rose-gall and pupa of archippus butterfly. <Amer. Ent. and Bot., September, 1870, v. 2, p. 307, fig. 189.

Answer to inquiry of L. B. Custar; figure of pupa of *Danais archippus*; descriptions of three undetermined galls on rose-leaf formed by *Rhodites* sp.?

1236. [RILEY, C. V.] White grubs in strawberry beds. <Amer. Ent. and Bot., September, 1870, v. 2, p. 307.

Answer to inquiry of J. B. Miller; food-habits of larva and description of imago of *Cyclocephala immaculata.*

1237. [RILEY, C. V.] Larva of the thoas swallow-tail. <Amer. Ent. and Bot., September, 1870, v. 2, p. 308.

Answer to inquiry of E. H. Sprague; food-plant and description of larva of *Papilio thoas* [=*cresphontes*]; the larva rare in Missouri.

1238. [RILEY, C. V.] Larva of clubbed tortoise-beetle. <Amer. Ent. and Bot., September, 1870, v. 2, p. 308.

Answer to inquiry of A. R. Bodley; *Cassida, Coptocycla* and *Deloyala* feed on *Convolvulaceæ* with the exception of *Deloyala* [=*Coptocycla*] *clavata* which feeds on *Solanaceæ.*

1239. [RILEY, C. V.] The banded Ips in calyx of pear. <Amer. Ent. and Bot., September, 1870, v. 2, p. 308.

Answer to inquiry of G. C. Brackett; food-habits and description of *Ips fasciatus.*

1240. [RILEY, C. V.] The larder-beetle. <Amer. Ent. and Bot., September, 1870, v. 2, p. 308, fig. 191.

Answer to inquiry of F. S. Sleeper; figures of larva and imago and of magnified hair of larva of *Dermestes lardarius*; ravages in collections of preserved animals.

1241. [RILEY, C. V.] Moth named. <Amer. Ent. and Bot., September, 1870, v. 2, p. 308.

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Answer to inquiry of "Subscriber;" description and figure of galls and description of *Rhodites bicolor.*

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Answer to inquiries of K. Parsons; formation and use of portable cases by *Tineina*; habits and character of the young of *Mytilaspis pomicorticis* [=*pomorum*]; food-habits of ants.

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Answer to inquiry of J. M. Wilson; occurrence of larva of *Darapsa* [=*Ampelophaga*] *myron* parasitized by *Apanteles congregatus*.

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Answer to inquiry of E. G. Hofman; occurrence of *Attacus cecropia* on plum.

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Answer to inquiry of L. R. Elliott; ravages of and means against *Chrysobothris femorata* on soft maple; ravages of *Arhopalus* [=*Cyllene*] *robiniæ* on black-locust.

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Answer to inquiry of C. H. Roberts; occurrence on cherry-trees of *Aphis* [=*Myzus*] *cerasi*, and of its enemies, the larva of *Hippodamia convergens* and *Syrphus* sp.; figure of the larva, pupa, and imago of the former; positions in which both species transform.

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Answer to inquiry of C. H. Roberts; ravages of *Haltica chalybea*; means against this species and *Selandria vitis* [=*Blennocampa pygmæa*] on grape-vines.

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Answer to inquiry of G. A. Watson; food-habits of *Pirates* [=*Melanolestes*] *picipes* and of Hemiptera in general; means against *Selandria* [=*Eriocampa*] *cerasi*.

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Spread of and means against *Pieris rapæ.*

1258. [RILEY, C. V.] Paris-green for the Curculio. <Amer. Ent. and Bot., October, 1870, v. 2, p. 338.

Inefficacy of the use of Paris-green against *Conotrachelus nenuphar.*

1259. [RILEY, C. V.] Beetles working in wheat, oats, and rye; the grain Silvanus. <Amer. Ent. and Bot., October, 1870, v. 2, p. 339, fig. 208.

Answer to inquiry of M. H. Boye; figure, description, and ravages of *Silvanus surinamensis*; means against the same and against *Calandra granaria* in grain; habitat and probable origin of the *Silvanus.*

1260. [RILEY, C. V.] Beetles in dried English currants. <Amer. Ent. and Bot., October, 1870, v. 2, p. 339.

Answer to inquiry of T. V. Munson; *Silvanus surinamensis* breeding abundantly in dried English currants.

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Answer to inquiry of S. Blanchard; abundance of *Silvanus surinamensis* in flouring-mills.

1262. [RILEY, C. V.] Carolina Sphinx. <Amer. Ent. and Bot., October, 1870, v. 2, p. 339.

Answer to inquiry of W. R. Howard; the larva of *Macrosila* [=*Protoparce*] *carolina* feeds on tobacco.

1263. [RILEY, C. V.] Insects clustered on apple-trees. <Amer. Ent. and Bot., October, 1870, v. 2, p. 339.

Answer to inquiry of R. L. Ham; habits and food of *Psocus venosus.*

1264. [RILEY, C. V.] Larvæ named. <Amer. Ent. and Bot., October, 1870, v. 2, p. 339.

Answer to inquiry of T. W. Gordon; stinging powers of the larvæ of *Empretia stimulea* and *Hyperchiria varia* [=*io*]; *Microgaster* sp. parasitic upon *Macrosila quinquemaculata* [=*Protoparce celeus*].

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Answer to inquiry of A. Furnas; description of gall of *Acarus aceris-crumena* n. sp. on leaves of sugar-maple; similar mite-galls occur on plum and cherry.

1266. [RILEY, C. V.] Cheese-fly and blow-fly. <Amer. Ent. and Bot., October, 1870, v. 2, p. 339.

Answer to inquiry of B.; skippers in cheese are larvæ of *Piophila casei*; those found in bacon of *Calliphora vomitoria.*

1267. [RILEY, C. V.] Fall army-worm. <Amer. Ent. and Bot., October, 1870, v. 2, p. 340.

Answer to inquiries of K. Kelsey and G. Pauls; seasons, ravages, and food-plants of *Laphygma frugiperda*; seasons and food-plants of *Leucania unipuncta.*

1268. [RILEY, C. V.] Larva of imperial moth; Thoas swallow-tail. <Amer. Ent. and Bot., October, 1870, v. 2, p. 340.

Answer to inquiry of G. M. Dodge; larva of *Ceratocampa* [=*Eacles*] *imperialis* feeds on maple.

1269. [RILEY, C. V.] Large Asilus fly. <Amer. Ent. and Bot., October, 1870, v. 2, p. 340.

Answer to inquiry of L. G. Saffer; food-habits of *Promachus vertebratus*, *P.* [=*Erax*] *bastardii*, and *Asilus missouriensis* [=*Proctacanthus milbertii*]; occurrence of undetermined galls under white-oak trees.

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Answer to inquiry of V. K. Deyo; habits of *Gryllotalpa borealis*.

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Answer to inquiry of H. S. Bontell; geographical distribution of *Callidryas philea*; occurrence of *Thysania zenobia* in Iowa.

1272. [RILEY, C. V.] Hag-moth larva. <Amer. Ent. and Bot., October, 1870, v. 2, p. 340, fig. 209.

Answer to inquiries of D. M. Hunter and G. Pauls; figure of larva and description of imago of *Limacodes* [=*Phobetrum*] *pithecium*; larva found on apple-tree; formation of its cocoon.

1273. [RILEY, C. V.] Insects named. <Amer. Ent. and Bot., October, 1870, v. 2, p. 340.

Answer to inquiry of Mrs. E. U. B.; larva of *Papilio asterias* feeds on parsnip; that of *Alaria* [=*Rhodophora*] *florida* on evening primrose; habits of the imago of the latter.

1274. [RILEY, C. V.] Some friends and foes. <Amer. Ent. and Bot., October, 1870, v. 2, p. 340.

Answer to inquiry of C. W. Spaulding; food-habits of *Harpactor* [=*Milyas*] *cinctus*, *Mysia* [=*Anatis*] *15-punctata*, and *Calosoma calidum*; *Prionus imbricornis* bred from grape-vine roots.

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Answer to inquiry of J. T. Hodgen; larva of *Ceratocampa* [=*Citheronia*] *regalis* found on persimmon.

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Answer to inquiry of E. H. King; food-plants and descriptions of larvæ of *Papilio asterias* and of *Acronycta oblinita*; function of the osmaterium of the former; vernacular name and figure of larva, cocoon, and imago of the latter.

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Answer to inquiry of T. W. Gordon; description of *Thyreus abbotii*; life-history of *Microgaster* sp. parasitic on larvæ of *Sphingidæ*.

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Answer to inquiry of J. W. Potts; food-habits of *Tipula* sp. and of *Macrodactylus subspinosus*; structure and habits of the several sexes of *Formicidæ*.

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Answer to inquiry of B. H. Foster; ravages of and means against *Pieris rapæ.*

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Editorial remarks appended to S. J. McBride's communication; description of *Simulium piscicidium* n. sp.

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Correction of error in mistaking a gall of *Cecidomyia vitis-pomum* for a hybrid fruit.

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Notice of death of Julius Lederer and J. T. Lacordaire.

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Explanation of diff rences in experience in feeding silk-worms on osage orange.

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Answer to inquiry of Mrs. M. Chappellsmith; *Astoma* [= *Trombidium*] *locustarum* parasitic on grasshoppers; similar mites on other insects; food-habits of *Nemobius vittatus* and *Orocharis saltator.*

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Answer to inquiry of C. E. Billings; food-habits and description of larva of *Epilachna borealis.*

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CONTENTS.

PREFACE 3

NOXIOUS INSECTS.

SNOUT-BEETLES, *Rhynchophora* 5

The whole vegetable kingdom and every part of each plant serve as food for insects, 5—Enumeration of insects affecting the different parts of the apple-tree, 5—Other food-habits of insects, 7—Vast extent of the science of entomology, 8—Beauty and simplicity of classification in entomology, 8—Each family distinguished by its general appearance, 8—Unity of habits in each family, 9—Distinguishing characters of snout-beetles, 9—Their larvæ, 10—They are among the most injurious beetles, 10—Injurious snout-beetles in Europe, 11.

The common plum Curculio, *Conotrachelus nenuphar* 11

It is single-brooded, 11—Experiments to prove this fact, 12—It hibernates as beetle, 13—Form of the egg, 13—Feeding habits of the beetle, 13—Creaking noise produced by it, 14—Stridulation in other insects, 14—It is nocturnal rather than diurnal, 14—Habits of the beetle at night, 14—Remedies, 15—The Ransom chip-trap process, 15; explanation of the process, 15; it is not so successful as anticipated, 15; it is not a new discovery, 16; number of Curculios caught by it, 16; its success dependent on the character of the soil, 17; directions for using the process, 17; more experiments needed, 17—Offering premiums for collecting specimens, 17—Absurdity of the application of Paris green for the Curculio, 18—Jarring by machinery, 18—The Hull Curculio-catcher defective in several respects, 18—The Ward Curculio-catcher, 20; how it could be improved, 20; rules for using the machine, 21—Curculio-catcher invented by Claxton & Stevens, 22—Hooten's Curculio-catcher, 22; its advantages and mode of operation, 24—Two true parasites of the Plum Curculio, 24—The Sigalphus Curculio parasite, 24; Fitch's account of it, 25; Walsh's doubt about its being parasitic on the Curculio, 25; experiments and observations proving that it is a parasite of the Curculio, 25; its development and frequent occurrence around St. Louis, 25; it attacks also other soft-bodied larvæ, 26; points in its natural history, 26; its position in the system, 27; description of the imago, larva, pupa, cocoon, and of the var. *rufus*, 27—The Porizon Curculio parasite, 28; how it differs from the foregoing, 28; description of the imago, 28—Importance of the work of these parasites of the Curculio, 29—Artificial propagation and distribution of parasites, 29.

The apple Curculio, *Anthonomus quadrigibbus* 29

How it differs from the plum Curculio, 30—Its natural history, 30—Food-plants, 30—The punctures it drills into the fruit, 31—The egg, 31—The larva and its habits, 31—The larva transforms within the fruit, 32—Amount of damage it does, 33—How its

1301. **Riley, C. V.**—Continued.

work in the fruit can be distinguished from that of other insects, 33—It is very injurious in Southern Illinois and parts of Missouri, 33—It is less injurious to apples than the plum Curculio, 33—Injury done by it to pears, 33—The rot in apples principally produced by it and by the plum Curculio, 34—Season of its appearance, 34—Remedies and preventive measures, 34—Description of larva and pupa, 35.

The quince Curculio, *Conotrachelus cratægi* 35

Its food-plants, 35—It is very injurious to the quince in the East, 36—Dr. Trimble's account of the damage done by it, 36—How the beetle differs from the two preceding Curculios, 36—Its transformations and habits, 37—Its puncture on the fruit, 37—It hibernates in the larva state, 37—Its larva mistaken by Dr. Fitch for that of the plum Curculio, 38—The imago state lasts only two months, 38—It does not attack the apple, 38—Remedies, 38—Description of the larva and pupa, 39.

The plum-gouger, *Coccotorus scutellaris* 39

How it differs from the preceding species, 39—Injury caused by it, 39—Food-plants, 40—It is often mistaken for the plum Curculio, 40—Season of its appearance, 40—Holes bored by it in the fruit, 41—The larva lives within the kernel of the fruit, 41—Remedies, 41

The strawberry crown-borer, *Tyloderma fragariæ* 42

Distribution of the insect, 42—Injury done by it, 42—Habits and characters of the larva, 43—Habits of the beetle, 43—Remedies, 43—Parasite, 44—How the larva differs from that of the grape-vine Colaspis, 44—Description of the imago and larva, 44.

The pea-weevil, *Bruchus pisi* 44

Insect enemies of the garden-pea, 44—Characters of the *Bruchidæ*, 45—Habits of other species of *Bruchidæ*, 45—Frequent occurrence of its larva in green peas, 45—Characteristics of the beetle, 46—It is in all probability an indigenous North American insect, 46—The beetle does not sting the peas, 46—The eggs are fastened by the female beetle on the outside of the pod, 47—The larva and its habits, 47—Its transformations, 47—Remedies and preventives, 48—Examination of peas intended for seed, 48—Concerted action necessary to exterminate the insect, 48—Mr. Saunders's account of the occurrence of the pea-weevil in Canada, 49—Other preventive measures, 49—Birds destroying the insect, 50.

The grain Bruchus, *Bruchus granarius* 50

Its introduction from Europe, 50—How it differs from the pea-weevil, 50—Curtis's account of its habits in Europe, 51.

The American bean-weevil, *Bruchus fabæ* 52

Food-plants, 52—Its geographical distribution, 52—Accounts of damage done by it in New York and Pennsylvania, 52—It has only lately become injurious, 53—Habits of the larva and beetle, 54—The proper nomenclature of the species, 54—Description of the imago, 55—Its differences from allied species, 55—Note on descriptions based upon individual variations, 56.

The New York weevil, *Ithycerus noveboracensis* 57

Damage caused by it to fruit trees, 57—Former descriptions of the insect, 57—Its breeding habits, 57—The pear blight not caused by the beetle, 58.

The imbricated snout-beetle, *Epicærus imbricatus* 58

Injury done by it to vegetation, 58—Its natural history still unknown, 58—General appearance of the beetle, 58.

1301. RILEY, C. V.—Continued.

The corn Sphenophorus, *Sphenophorus sculptilis* 59
Damage caused by it to corn plants, 59—Characteristics of the beetle, 59—Its larval history still unknown, 59—Probable habits of the larva, 59—Walsh's description of the imago, 59.

The cocklebur Sphenophorus, *Rhodobœnus 13-punctatus* 60
It is not injurious, 60—Coloration of the beetle and its probable identity with *S. 13-punctatus*, 60—The larva, 60—Enumeration of other injurious snout-beetles, 60.

INSECTS INJURIOUS TO THE GRAPE-VINE 61

The grape leaf-folder, *Desmia maculalis* 61
Its geographical distribution, 61—Generic characters, 61—Characters of the moth, 61—Sexual differences, 62—Habits of the larva, 62—Remedy and prevention, 62—Natural enemies, 62—Description of the larva, 62.

The grape-vine epimenis, *Psychomorpha epimenis* 63
Its larva formerly mistaken for that of the pearl wood nymph, 63—Characters of the moth and sexual differences, 63—Habits of the larva when about to transform, 64—Its grape-vine feeding habits formerly unknown, 64—Description of the larva, 64; of the chrysalis, 65.

The grape-vine plume, *Oxyptilus periscelidactylus* 65
Work of its larva and of that of the grape-vine Epimenis, 65—Both larvæ rather beneficial when not too numerous, 65—Characters of the larva, 66—Peculiar form of the pupa, 66—Protective mimicry of the pupa, 67—Habits and appearance of the moth, 67—Is it single or double-brooded, 67.

The common yellow bear, *Spilosoma virginica* 68
How the young larvæ differ from the mature larva of the grape-vine plume, 68—Food-plants, 68—Color variations in the larvæ, 69—The chrysalis, 69—The imago, 69 –Parasite, 69—Remedy, 69.

The smeared dagger, *Acronycta oblinita* 70
The larva is polyphagous, 70—Characters of the larva, pupa, and imago, 70—Remedy, 70—Parasites, 71—Description of imago and larva, 71; of the pupa, 72.

The pyramidal grape-vine worm, *Pyrophila pyramidoides* 72
Distinguishing characters of the worm, 72—Its food-plants, 72—Its transformations, 72—It is single or double-brooded according to latitude, 73—Its closely allied congener in Europe, 73—Remedies, 73—Description of the larva, 73; of the pupa and imago, 74—How it differs from *Amphipyra pyramidea*, 74—Description of the larva and imago of the spattered copper under-wing, 75.

The grape-root borer, *Sciapteron polistiformis* 75
Its distribution, 75—Distinguishing characters of the larva, 76—Its transformation, 76—Characters of the moth, 76—Description of the imago and its sexual differences, 76—Work of the larva on grape-roots, 77—Remedies, 77.

The spotted Pelidnota, *Pelidnota punctata* 77
It is usually not injurious, 77—The larva and its habits, 78—The beetle, 78—Description of the larva, 78.

The grape-vine flea-beetle, *Haltica chalybea* 79
It is well known to the grape-grower in Missouri, 79—Its distribution and food-plants, 80—Hibernation, 80—Damage done by the beetle in spring, 80—The eggs, 80—Damage caused by the larvæ, 80; their transformation, 80—Remedies, 80—Description of the larva and pupa, 81.

1301. RILEY, C. V.—Continued.

The grape-vine Colaspis, *Colaspis flavida* 81

Fitch's account of the insect, 82—Varieties of the beetle, 82—The larva in all probability attacks sometimes that of the leaf-folder, 82—It lives on the roots of the strawberry, 82—Larva of the European *Colaspis barbara,* 82—Difference in habits of larvæ of allied species, 83—Singular characters of the larva of the grape-vine Colaspis, 83—Work of the larva on strawberry roots, 83—Remedy, 84—Description of the larva, 84.

The grape-leaf gall-louse, *Phylloxera vastatrix* 84

Its life-history not yet fully studied, 84—Previous accounts of the insect by Fitch, Shimer, and Walsh, 85—The root disease in France, 85—The *Phylloxera vastatrix* recognized as the cause of this disease, 85—Identity of the gall-louse with the root-inhabiting insect, 86—The American and European insects are identical, 86—Remedies tried in France, 86—The disease directly caused by the Phylloxera, 87—Injury done by the Phylloxera in Missouri, 87—Forming of the gall, 87—Propagation of the lice and multiplication of the galls, 88—The gall-lice descend in the latter part of the season to the roots, 88—Change of the insect after passing from the leaves to the root, 88—Questions still to be settled in the life-history of the Phylloxera, 88—Rare occurrence of the winged form, 89—The insect can be transported from one place to another on roots, 89—It hibernates on the roots, 89—Grape-vines that should be planted, 89—Number of indigenous species of the grape-vine, 90—Grape-vines which are most seriously infested with the grape-leaf louse, 90—Danger in planting the Clinton among other grapes, 91—Insects acquiring different food-habits as illustrated in the apple-maggot and the pine-leaf scale, 92—The different forms of the grape-leaf louse, 93—Discussion on the proper place of the insect in the classification, 93—On Dr. Shimer's proposed new families *Dactylosphæridæ* and *Lepidosaphidæ,* 93—Objections to Fitch's specific name *vitifoliæ,* 95—Identity of the European with the American insect, 95—The apple-root louse is identical with the woolly Aphis, 95—The gall-inhabiting form of the Phylloxera identical with the root-inhabiting type, 96—Characters of the genus Phylloxera and its place in the system, 96.

THE COLORADO POTATO-BEETLE AGAIN, *Doryphora 10-lineata* 79

Its onward march, 97—It invades the Dominion of Canada, 97—How it crossed Lake Michigan, 97—It will probably spread through Ontario unless preventive measures are taken, 98—Excellent chance to prevent its spread in Canada, 98—The Paris green remedy, 99—It is efficient if judiciously applied, 99—It does not affect the tuber, 99—Natural checks to the increase of the potato-beetle, 100—The great Lebia destroying the larvæ, 100—Bogus experiments, 100—The true remedy, 101—How to prevent the insect from becoming too numerous, 101—Planting early varieties of potatoes, 101.

THE CODLING-MOTH AGAIN, *Carpocapsa pomonella* 101

Hay-bands around the trunk of the tree more effectual than rags placed in the fork, 102—The codling-moth is single-brooded in the more northern countries, but double-brooded in the latitude of St. Louis, 102—Sexual differences of the moth, 103—Sexual characters in the genera *Argynnis* and *Grapta,* 103—The codling-moth also infests peaches, 103.

1301. Riley, C. V.—Continued.

THE CORN-WORM *alias* BOLL-WORM, *Heliothis armigera* 104

Its geographical range, 104—Injury done by it to corn, 104—It attacks tomatoes and other plants, 105—Food-plants of the stalk-borer, 105—The egg of the corn-worm, 105—Mr. Glover's account of the habits of the boll-worm, 106—The larva is very variable in color, 107—Its transformations, 107—Number of annual broods, 107—Amount of damage done by it, 107—Remedies, 108—Attracting the moth by sweets, 108—Heard's moth-trap, 109.

THE FALL ARMY-WORM, *Laphygma frugipérda* 109

Reports of its appearance in 1870, and how it was generally mistaken for the true army-worm, 109—It was also mistaken for the boll-worm, 111—Injury caused by it, 111—How it differs from the true army-worm, 112—It is a very variable species in the imago state, 113—The spiderwort owlet-moth, and how it differs from the fall army-worm moth, 113—Number of annual broods and time of appearance of the fall army-worm, 114—The eggs and how they are deposited, 114—Preventive measures, 115—It is never injurious during two consecutive years, 115—Parasitic checks, 116—Description of the imago, 116; of the varieties and the earlier states, 117.

THE APPLE-TREE TENT-CATERPILLAR, OR AMERICAN LACKEY-MOTH, *Clisiocampa americana* 117

The web-nests of the caterpillar and importance of their destruction, 118—The egg-mass, 118—The caterpillar and its habits, 119—Transformations of the insect, 119—The imago very variable in color, 119—Food-plants of the caterpillar, 120—Remedies, 120—Parasites and enemies, 120.

THE TENT-CATERPILLAR OF THE FOREST, *Clisiocampa disstria* 121

The egg-mass and how the eggs are deposited by the female moth, 121—Development of the larva, 122—Fitch's description of the full-grown larva, 123—Confusion arising from want of uniform rule in describing larvæ, 123—The cocoon, 124—The chrysalis and the moth, 124—The web spun by the caterpillar, 124—Mr. Ferris's observations on differences in habits, appearance, and food-plants of the caterpillar, 125—Phytophagic varieties or species, 127—Food-plants of the caterpillar, 127—Its destructive powers, 127—Remedies, 128—Natural enemies and parasites, 128—Summary, 129.

THE FALL WEB-WORM, *Hyphantria cunea* 130

It is often mistaken for the tent-caterpillars, 130—It feeds upon almost every kind of tree and shrub, 130—The web spun by the worm, 130—General appearance of the worm, 130—The chrysalis and imago, 131—Number of annual broods, 131—Plants it prefers, 131—How it differs from the tent-caterpillar, 132—Remedies, 132—Description of the larva, 132.

THE BLUE-SPANGLED PEACH-WORM, *Callimorpha lecontei* 132

Winter retreat of the larva, 132—General appearance of the larva, 133—Chrysalis and imago, 133—*Callimorpha vestalis* Packard synonymous with *C. fulvicosta*, 133—Food-plants, 134—Description of the larva, 134.

THE ASH GRAY PINION, *Lithophane cinerea* 134

Food-plants of the larva, 135—Transformations of the insect, 135—Characters of the moth, 135—Description of larva and imago, 135—Remarks on allied species, 136.

1301. Riley, C. V.—Continued.

BENEFICIAL INSECTS.

THE GLASSY-WINGED SOLDIER-BUG, *Campyloneura vitripennis* 137

It preys upon different species of leaf-hoppers, 137—Its larva and pupa, 138—How it seizes its prey, 138—Coloration of the insect, 138—It was never observed before to attack the leaf-hoppers of the grape-vine, 139—Habits of the *Phytocoridæ*, 139.

INNOXIOUS INSECTS.

THE WHITE-LINED MORNING SPHINX, *Deilephila lineata*.............. 140

Resemblance of the moth to a humming bird, 140—Interest attached to the study of lepidopterous larvæ, 140—Larval variations in the same species, 141—Food-plants of the larva, 141—The light and dark colored forms of the larva, 142—Its geographical range, 142—Parasite, 142.

TWO OF OUR COMMON BUTTERFLIES 142

The archippus butterfly, *Danais archippus* 143

Synonymy of its specific name, 143—Its geographical distribution, 143—Characters of the *Danaidæ*, 143—Sexual differences, 143—Food-plants, 144—Hibernation, 144—Two annual broods, 144—Description of the egg, 144—The larva and its larval changes, 145—How the horns of the larva become longer at each molt, 145—The full-grown larva, 146—Interest attached to the metamorphoses of insects, 146—How the larva becomes a chrysalis, 147—The hardened chrysalis, 147—Duration of the chrysalis state, 147—The issuing of the butterfly, 148—Protective colors of insects, 148—Nauseous odor of the archippus butterfly in all its stages, 149—The Tachina-parasite of the archippus larva, 149—Action of the parasitized larva, 149—How the Tachina larva and other insects prepare the lid of their puparia, 149—Characters of this Tachina-fly, 150—Difficulties of the study of the *Tachinariæ*, 150—Two forms occurring in *Tachina archippivora*, 150—The butterfly often congregating in immense swarms, 151—Probable reasons of this assembling in swarms, 152.

The disippus butterfly, *Limenitis disippus* 153

Distinguishing characters of the Nymphalidæ, 153—Food-plants and geographical range, 153—The egg, 153—Description of the egg, 154—Development of the larva, 154—Description of the mature and young larva, 154—The insect hibernates as young larva, 155—Case prepared by the larva for its winter quarters, 155—Modifications of the case, 156—Peculiar habit of the autumnal larvæ, 156—Parasites, 157—Tachina-fly, 157—The Disippus egg-parasite, 157—The disippus Microgaster, 158.

Mimicry as illustrated by these two butterflies, with some remarks on the theory of natural selection 159

Conformity of color between animals and their surroundings, 159—Definition of the term "mimicry," 160—Pungent odor possessed by the *Danaidæ*, 160—Their mode of flight, 160—Protection they derive from their peculiar odor, 161—*Pieridæ* and *Danaidæ* in the valley of the Amazon, 161—Mimetic forms of *Pieridæ*, 161—Explanation of the origin of mimetic forms, 162—Mimicry between the archippus and disippus butterflies, 163—The ursula butterfly, 163—Its caterpillar and chrysalis undistinguishable from those of the Disippus, 163—Its imago has no protective color, 164—Mr. Bennett's objections to the theory of natural selection producing mimetic forms, 165—Mr. Scudder's objections, 166—Discussion of Mr. Scudder's arguments, 167—Mr. Murray's ob-

1301. Riley, C. V.—Continued.

jections to the connection between mimetic resemblances and natural selection, 170—Natural selection not the only power producing mimicry, 171—Reasons for discussing in this report the theory of natural selection, 172—Natural selection involves belief in the doctrine of evolution, 173—Darwinism is neither irreligious nor atheistic, 174.

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CONTENTS.

PREFACE 3

NOXIOUS INSECTS.

NOTES OF THE YEAR 5

The Colorado potato-beetle,* *Doryphora 10-lineata* 5

Its injuries in 1871, 5—Its appearance in great numbers in early spring, 5—Exorbitant price of Paris green, 6—Natural enemies of the beetle very abundant, 6—Diminution in numbers of the beetle later in the season, 7—Causes of such diminution, 7—Damage caused by the potato-beetle in Missouri, 7—It invaded Canada in 1870, 8—The three-lined potato-beetle mistaken for it in New York and Massachusetts, 8—Its further spread eastward irresistible, 8—Slow spread of the insect in the South, 9—Its present extent northward, 9—It spreads but does not leave the districts already invaded, 9—It is not injurious to potatoes in Colorado at a certain altitude, 10—New food-plants, 10—It feeds upon cabbage, 10—Its hibernation, 11—Objections raised against the use of Paris green, 11—Paris green is an efficient remedy and now in general use, 12—Box for dusting Paris green, 12—Mixing the poison with diluents, 12—No serious cases of poisoning have come to knowledge, 13—Antidote for Paris green, 13—Other applications, 13—Messrs. Saunder's and Reed's experiments with various substances, 14—Experiments with decoctions of various plants, 15—Air-slacked lime as a remedy, 15—Mechanical means, 15—Squire's brushing machine, 15—Creighton's improved patent insect destroyer, 15—Disadvantage of all mechanical means, 16—A simple and effective way of brushing off and killing the bugs, 16—Natural enemies increasing, 16—Chickens acquiring a taste for eggs and larvæ of the beetle, 16—Spiders are among its enemies, 17—The 15-spotted lady-bird and its larva, 18—The icy lady-bird, 18—The ring-banded soldier-bug, 19—The dotted-legged plant-bug, 19—The spined soldier-bug in its earlier states, 20—The Nebraska bee-killer, 21—The Kansas bombardier-beetle, 21—Rove-beetles of the genera *Philonthus* and *Quedius*, 21.

The codling-moth again, *Carpocapsa pomonella* 22

Time of year that the first moths appear, 22—Time required for development, 22—Proper time to apply the bandages around the tree, 22—It attacks peaches, 22—Best kind of bandages, 23—Wier's apple-worm trap, 23—Advantages and disadvantages of the trap, 24—Overestimating the value of Wier's trap, 25—Jarring, 25—Mr. Chapin's method of knocking down the wormy apples, 26—When this operation should begin, 26—Fires, lights, and bottles of liquid not to be recommended as a remedy, 27—Worthlessness of Todd's book, "The apple culturist," 28—Natural ene-

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* Extract in <Sci. Amer., 25 May, 1872, v. 25, p. 351.

1311. RILEY, C. V.—Continued.

mies, 28—The Pennsylvania soldier-beetle and its larva, 28—The two-lined soldier-beetle and its larva, 29—Description of the larva of *Telephorus bilineatus*, 30—Summary, 30.

The periodical Cicada, *Tibicen septendecim* 30

Reproduction, with corrections and additions, of the chronological table of Broods I to VI from Report I, 31.

The grape-vine Colaspis again, *Colaspis flavida* 34

Redescription of the larva from well-preserved specimens, 34.

THE HARLEQUIN CABBAGE-BUG, *Murgantia histrionica* 35

It was not known in Missouri prior to 1870, 35—Its geographical range and color variations, 35—Insect enemies of the cabbage-plant, 35—Dr. Lyncecum's account of its habits and injury caused by it in Texas, 36—Its appearance in Missouri in 1870, 36—The egg, 37—The larva and pupa, 37—Several annual broods, 37—The mature bug, 37—Injury caused by it, 37—Its congener in Europe, 38.

THE RASCAL LEAF-CRUMPLER, *Acrobasis indignella* 38

Its proper scientific name, 38—It is hardly noticed in summer time, 38—Injury caused by it, 39—It hibernates as larva, 39—Habits of the larva, 39—The larval case, 39—Characteristics of the moth, 39—Food-plants, 39—Remedies, 40—Natural enemies, 40—Le Baron's description of *Tachina phycitæ*, 40—*Limneria fugitiva*, 41—Description of imago, larva, and chrysalis of the rascal leaf-crumpler, 41—Description of the variety *nebulella*, 42.

THE WALNUT CASE-BEARER, *Acrobasis juglandis* 42

Other case-bearers enumerated, 42—The case of the walnut case-bearer, 42—Differences between the moth and that of the rascal leaf-crumpler, 43—Natural enemies, 43—Description of *Perilitus indigator*, 43.

THE APPLE-LEAF SKELETONIZER, *Pempelia hammondi* 44

Its work on the leaves of apple-trees, 44—The worm and the chrysalis, 44—Appearance of the moth, 45—Mr. Hammond's account of the injury caused by the worm, 45—The European *Acrobasis consociella*, 45—Remedies and parasites, 45—Description of the imago, larva, and pupa, 46.

THE GREEN APPLE LEAF-TYER, *Teras cinderella* 46

It occurs almost always in company with the foregoing, 46—Characters and habits of the worm, 46—The chrysalis, 47—Description of imago, larva, and chrysalis, 47.

THE LESSER APPLE LEAF-FOLDER, *Teras malivorana* 47

Its larva and pupa closely resemble those of the foregoing species, 47—Mr. Wier's account of its habits, 48—Remedy, 49.

THE APPLE-LEAF BUCCULATRIX, *Bucculatrix pomifoliella* 49

It is not very injurious in Missouri, 49—Account of damage caused by it in New York, 50—The worm and its habits, 50—Its transformations, 50—Season of the appearance of the moth, 50—Remedies, 50—Habits of *Bucculatrix thuiella*, 51—Description of larva and pupa of the apple-leaf Bucculatrix, 51.

THE APPLE-TWIG BORER, *Amphicerus bicaudatus* 51

Its frequent occurrence in Missouri, 51—Characters of the beetle, 52—The holes made by it in the twigs, 52—The holes are made only for food and protection, 52—The insect breeds probably in the sap-wood of forest trees, 52—The larva of *Sinoxylon basilare* mistaken for that of the apple-twig borer, 52—Remedy, 53.

1311. Riley, C. V.—Continued.

INSECTS INJURIOUS TO THE GRAPE-VINE 53

The red-shouldered Sinoxylon, *Sinoxylon basilare* 53

Characteristics of the insect as imago, larva, and pupa, 54—Damage done by it to grape-vines, fruit trees, and hickory, 54—Description of the larva and pupa, 54.

GRAPE DISEASE 55

The grape-leaf gall-louse, *Phylloxera vastatrix* 55

Its scientific name, 55—The law of priority, 55—European grape-vines valueless in the eastern United States, 55—Deterioration of some of our native vines, 56—Climatic reasons for the failure of European vines, 56—The principal cause of this failure is the Phylloxera, 56—Further proof of the identity of the American with the European insect, 57—Reasons for the identity of the gall-louse with the root-louse, 57—Further facts respecting the habits of the root-louse, 58—Underground forms, 58—The young lice and their habits, 59—Hibernation, 59—The pupa, 59—The winged female, 59—Susceptibility of different vines to the attacks of the louse, 60—Classification of the North American grape-vines according to their practical importance, 60—Synopsis of the true grape-vines of the United States, by Dr. George Engelmann, 60—Difficulty of separating the cultivated varieties of grape-vine, 61—Importance of a proper classification of cultivated grape-vines, 62—Importation into Europe of resisting American vines, 62—Enumeration of the cultivated varieties and their susceptibility to the disease, 63—No variety is entirely exempt from the attacks of the root-louse, 64—American vines which resisted the root-louse in Europe, 64—Means of contagion from one vine to another, 64—The spread of the root-lice from one vine to another, 64—Transportation of the louse upon the roots of seedlings and cuttings, 64—Spread of the disease in France, 64—The winged female of the root-louse and her function, 65—The vernal leaf-gall, 65—Preference of the winged Phylloxera for the Clinton grape and its allies, 65—Power of flight of *Phylloxera caryæfoliæ*, 66—Deposition of the eggs upon the leaf, 66—Probable reasons why the injuries of the Phylloxera are greater in Europe than in America, 66—Outward and more visible effects of the root-disease, 67—Practical suggestions, 67—No need to destroy the Clinton vines, 67—Influence of soil on the intensity of the disease, 67—Remedies, 68—Destruction of the gall-lice, 68—Destruction of the root-lice, 68—Results of experiments in France with various substances, 68—Irrigation and submersion, 69—Résumé of the insect's history, 69—No need of unnecessary alarm, 70.

BENEFICIAL INSECTS.

SILKWORMS 72

Introductory 72

The *Morus multicaulis* fever and its reaction, 72—Increasing attention lately given to silk-culture in America, 72—North America well adapted to the raising of silk, 73—General outlines of the natural history of the eight species of silkworms treated of in this report, 74.

1311. RILEY, C. V.—Continued.

The mulberry silkworm, *Sericaria mori* 75

Its past history, 75—Earliest silk-culture in China and India. 75—Its introduction into Europe, 76—Value of silk produced in France, 76—The "Silk Supply Association" in England, and its objects, 76—Countries exporting raw silk, 77—The name given to silk by different nations, 77—History of the mulberry silkworm in America, 77—Its introduction and failure of earlier efforts, 77—Renewal of silk-culture within the past decade, 77—Silk manufacture in the United States, 78—Favorable prospects for raising silk in this country, 78—Silk-growing in California, 79—Mr. Prevost's "California Silk-grower's Manual," 79—False statements and exaggerations in Prevost's book, 79—Sale of Californian silkworm eggs, 80—Disastrous effect of the Franco-Prussian war on the egg trade, 81—Success of silk-culture in California dependent on the ability to reel the silk, 81—Silk-culture in Kansas, 82—Mons. Boissière's silk establishment and its chances of success, 82—Silk-growing in Missouri, 83—The fall season in Missouri eminently propitious for rearing silkworms, 84—Natural history of the silkworm, 84—Races of the silkworm produced by domestication, 84—Effects produced on the insect by domestication, 85—The egg, 86—Larva and larval changes, 86—Cocoon, chrysalis, and moth, 87—No insect parasite of the silkworm in Europe, 87—The "Uji" disease in China and Japan, 87—Diseases of the silkworm, 88; the *Muscardine*, its effect and cause, 88; the *Pébrine* disease, its symptoms and cause, 89; nature and origin of these diseases, 90—Other diseases of the silkworm, 91—Best varieties or races, 90—Different forms of cocoons produced by different races, 92—How best to rear silkworms, 92—Rearing a very simple process, 92—Character of climate of the Japanese silk districts, 93—Keeping the eggs during the winter, 93—Hatching of the eggs, 93—Room and building for the rearing of the worms, 93—The feeding net or fillet, 94—Importance of carrying all the worms simultaneously through their molts, 94—Regularity of feeding, 95—Regulating the temperature, 95—Cocoonery, 96—Choking the chrysalis, 96—Egg-laying, 97—Selecting and fastening the cocoons for breeding purposes, 97—Treatment of the female moths after copulation, 97—Preservation of the eggs, 97—Reeling, 98—Great skill required to accomplish the work properly, 98—Classification of raw silk, 98—Preparing the cocoons for reeling, 98—Objects of and manipulations in reeling, 99—Best food for the worms, 100—Varieties of the mulberry, 100—Cultivation of the mulberry, 100—Osage orange as silkworm food, 100—Introduction of the osage orange into France, 100—Experiments in America with feeding silkworms on osage orange, 101—Advantages and disadvantages of the osage orange, 102.

The cecropia silkworm, *Attacus cecropia* 103

Changes made in its scientific generic name, 103—General appearance of the moth, 103—Fitch's explanation of the specific name, 104—Food-plants, 104—The cocoon, 104—Value of the cocoon as compared with that of the polyphemus moth, 105—How the moth issues from the cocoon, 105—The moth immediately after hatching, 106—The egg, 106—Description of the larval changes,

1311. Riley, C. V.—Continued.

106—Strange habit of birds of using the empty cocoon as a storehouse, 107—The cecropia worm can not be classed as an injurious insect, 107—*Samia columbia* ought to be considered a variety of *cecropia*, 107—Parasites, 107—The long-tailed Ophion, 107; its mode of oviposition, 108; habits of its larva, 108—The cecropia Tachina-fly, 108; how it affects its victim, 108; its larva and imago, 109—The Mary Chalcis-fly, 109; how it escapes from the cocoon of the moth, 109; description of the imago, 110—The cecropia Cryptus, 110; its habits, 110; description of the two sexes, 111; how it differs from the allied species, 111.

The Ailanthus silkworm, *Attacus cynthia* 112

Difference between the silkworms of the castor-bean and Ailanthus, 112—Introduction of the Ailanthus silkworm into Europe, 113—Ailanthiculture in Europe, 113—Its introduction into America, 114—Disadvantages of the Ailanthus silkworm, 115—Its acclimatization in America and Australia, 115—Value of the cocoon, 115—Mr. Forgemol's device for unwinding the cocoon, 116—Natural history of the Ailanthus silkworm, 117—The egg and mode of egg-laying, 117—Larval changes, 117—Pupation, 118—The imago and its variations, 118—Food-plants, 118—Directions for raising the worms, 119—A good word for the Ailanthus tree, 120.

The promethea silkworm, *Attacus promethea* 121

Value of the cocoon, 121—Mode of egg-laying, 121—Larval changes, 121—How the cocoon is fastened to the twig, 122—Striking sexual difference in the moth, 122—*Callosamia angulifera* ought not to be considered as a different species, 122—Food-plants of the worm, 123—Natural enemies, 123.

The luna silkworm, *Actias luna* 123

The beautiful appearance of the moth, 123—The cocoon, 124—Food-plants, 124—Larval changes, 124—Season when the imago issues, 125—No parasites of the worm known, 125—*Actias selene* probably identical with *luna*, 125.

The polyphemus silkworm, *Telea polyphemus* 125

Mode of egg-laying, 125—The egg, 126—Food-plants, 126—Larval changes, 126—The cocoon, 126—Mr. Trouvelot's account of the issuing of the moth, 127—Wonderful vitality of the chrysalis, 127—Characters of the moth and its variations, 128—The broad antennæ of the male moth mistaken for a third pair of wings, 128—Difficulty of reeling the cocoon, 129—Number of annual broods, 129—Parasites, 129.

The yama-maï silkworm, *Antheræa yama-mai* 130

Its native home and food-plant, 130—Its introduction into Europe and Australia, 130—Attempts at raising it in America, 130—The egg and how it should be kept over winter, 131—Climate most favorable for the worm, 131—The worm and its resemblance to the leaf, 132—Food-plants, 132—Larval changes, 132—The cocoon and the value of its silk, 133—The moth and its habits, 133—Difficulties of rearing the worm, 133—Mr. Adams's account of rearing the yama-maï worm in Japan, 134—The Uji parasite, 136.

The perny silkworm, *Antheræa pernyi* 137

Its native home, 137—How it differs from the preceding, 137—Larval changes, 137—The cocoon and its silk, 137—The moth, 137—Its culture in China, 138—The tusseh silkworm, 138.

1311. **Riley, C. V.**—Continued.

Summary.. 138

Successful silk culture possible in this country, 138—Comparative value of the different species of silkworms, 138.

INNOXIOUS INSECTS.

The horned Passalus, *Passalus cornutus*.............................. 139

Its frequent occurrence in old logs, 139—The noise produced by the beetle, 139—It occurs only in decaying wood, 140—The larva and its exceptional character, 140—Description of the larva, 140—Previous description of Passalus larvæ, 141—Description of the pupa, 141.

The great leopard moth, *Ecpantheria scribonia* 141

Characters of the larva, 141—Food-plants, 142—Hibernation and transformations, 142—The imago, 142—The larva able to resist extreme cold, 143—Description of the larva, 143.

The isabella tiger moth, *Pyrrharctia isabella*...................... 143

Characters of the larva, 143—Food-plants, 143—Cocoon and chrysalis, 143—The moth, 144—The popular name "fever-worm" in the South, 144—No parasite known of this and the preceding species, 144.

The acorn moth, *Holcocera glandulella* 144

The egg laid in acorns that have been ruined by *Balaninus rectus*, 144—Habits of the larva, 144—Characters of larva and moth, 145—Description of imago, larva, and pupa, 145.

1312. **Riley, C. V.** Thomas Wier's apple-worm trap. <Amer. Agric., April, 1872, v. 31, pp. 142–143, 1 fig.

Description and figure of Wier's apple-worm trap.

1313. **[Riley, C. V.]** Remarkable parasitic fungus. <Sci. Amer., 25 May, 1872 [v. 40], n. s., v. 26, p. 347.

Description and figure of unidentified fungus infesting the larva of the white grub, *Lachnosterna fusca*.

1314. **Riley, C. V.** Cut-worm lion. <Colman's Rural World, 15 June, 1872, fig. S.-b. No. 5, p. 47.

History of the larva and imago of *Calosoma calidum*, an enemy to cut-worms.

1315. **Riley, C. V.** Cut-worms. <Cultivator and Country Gentleman, 20 June, 1872, v. 37, p. 392.

Dandelions and other weeds furnish food for young cut-worms which hatch in the fall; land should be kept clear of weeds at that season.

1316. **Riley, C. V.** Flat-headed apple tree-borer in horse chestnut. <Colman's Rural World, 22 June, 1872, fig. S.-b. No. 5, p. 47.

Answer to inquiry of S. S. R.; natural history of larva and imago of *Chrysobothris femorata*.

1317. **Riley, C. V.** A new insect. <Western Planter, 29 June, 1872. S.-b. No. 5, p. 49.

Answer to inquiry of F. Halsinger; *Nysius* n. sp., very destructive to potatoes.

1318. **Riley, C. V.** Codling-moth; jarring down infested fruit. <Cultivator and Country Gentleman, 4 July, 1872, v. 37, p. 422.

Excrement outside of the fruit indicates the exit of the worm, with some varieties; with others the worm may be often found after the excrements are visible.

1319. **Riley, C. V.** Food for silkworms. <Colman's Rural World, 13 July, 1872. S.-b. No. 5, p. 40.

Osage orange superior to red-mulberry.

1320. **Riley, C. V.** The apple maggot-fly, *Trypeta pomonella* Walsh. <Amer. Agric., July, 1872, v. 31, pp. 263–264, 2 figs.

Answer to letter of J. H. Spatter; comparative descriptions and figures of larvæ, pupæ, and imagos of *Trypeta pomonella* and *Carpocapsa pomonella*; figures showing injuries of both species; distribution and means against *Trypeta pomonella*.

1321. **Riley, C. V.** Worms on Dutchman's pipe. <Colman's Rural World, 3 August, 1872, fig. S.-b. No. 5, p. 136.

Answer to inquiry of J. T. C.; life-history of *Papilio philenor*.

1322. **Riley, C. V.** Apple-leaf worm. The apple-leaf skeletonizer. <Colman's Rural World, 10 August, 1872, fig. S.-b. No. 5, p. 138.

Answer to inquiry of L. R. Bryant; habits and times of appearance of *Pempelia hammondi*.

1323. **Riley, C. V.** Eggs in grape-canes and apple-twigs. <Amer. Agric., August, 1872, v. 31, p. 302, figs. 1–7.

Figures of eggs and of twigs punctured by *Orocharis saltator*, *Œcanthus niveus*, and *Ceresa bubalus*; figures imagos of the same; habits, descriptions of eggs, and imagos of the three species.

1324. **Riley, C. V.** Borers in evergreens. <Gardener's Mo. and Hortic., December, 1872, v. 14, p. 373.

Larvæ of *Monohammus titillator* the worst enemy of the white-pine; another species of *Cerambycidæ* injurious to red-cedars; a host of bark-borers affect all kinds of evergreens.

1325. **Riley, C. V.** Einige unserer schädlicherer Insekten. <St. Louis, Mo., 1872, p. 35, il. S.-b. No. 19, pp. 174–190.

Causes of the decadence of viticulture in the United States; habits, ravages, specific identity, and figures of several stages of the leaf-inhabiting and root-inhabiting forms of *Phylloxera vastatrix*; identity of the European and American grape *Phylloxera*; susceptibility of the different species of grape to the attacks of the same; principal manifestations of attack; preventive and remedial measures; description and figures of *Conotrachelus nenuphar*; habits, ravages, parasites, enemies, and means against it; description of Ransom's trap, Hull's, Ward's, and Hooten's machines for capturing the imagos; figures of the machines. Natural history, food-plants, distribution, enemies, parasites, and means against *Doryphora decemlineata*; figures of all stages of the same; use of Paris green and other powders; mechanical devices for collecting the insects.

1326. **Riley, C. V.** Harvest mites. <Amer. Nat., January, 1873, v. 7, pp. 16–19, fig. 5. Extract: <Colman's Rural World, 21 June, 1876, 2 figs. S.-b. No. 10, pp. 170, 171.

List of insect parasites on man; description, figures, habits of and means against *Leptus* [= *Tetranychus*] *americanus* n. sp. and *L.* [= *T.*] *irritans* n. sp.

1327. **Riley, C. V.** *Vanessa antiopa.* <Ent. Mo. Mag., January, 1873, v. 9, p. 195.

Habits and food-plants of *Vanessa antiopa*.

1328. RILEY, C. V. Entomological correction. <Cultivator and Country Gentleman, 6 March, 1873, v. 38, p. 149.

Lema trilineata does not occur in southwestern Missouri, as stated by W. R. Howard.

1329. RILEY, C. V. Fifth annual report on the noxious, beneficial, and other insects of the State of Missouri, made to the State Board of Agriculture, pursuant to an appropriation for this purpose from the legislature of the State. <8th Ann. Rept. State Board of Agric. for 1872, 18 April, 1873, pp. 160+8, 75 figs. Separate: <Jefferson City, Mo., 18 April, 1873, pp. 160+8, 75 figs. Review by A. S. Packard, jr.: <Amer. Nat., August, 1873, v. 7, pp. 471–477, figs. 115–130. Reply to Packard and rejoinder by Packard: <Amer. Nat., March, 1874, v. 8. pp. 181–188.

CONTENTS.

PREFACE 3

Entomology, its relations to agriculture and its advancement* 5

Definition of entomology, 5—The term "insect," 5—The four subkingdoms of the animal kingdom, 6—Characteristics of insects, 7—Classification of insects, 8—Hymenoptera, 9—Coleoptera, 10—Lepidoptera, 11—Hemiptera, 12—Diptera, 13—Orthoptera, 14—Neuroptera, 14—Osculant and aberrant groups, 15—Importance of entomology as a study, 17—Economic importance of entomology, 18—Relation of insects to agriculture, 18—Damage inflicted by insects to agriculture and horticulture, 19—Progress of economic entomology, 19—Economic entomology in Europe, 19—Insects in America much more injurious than in Europe, 21—State entomologists and entomologists in public positions in the United States, 21—How to counterwork noxious insects, 23—Prevention, 24—Checking the spread of injurious insects, 24—Cure, 25—Modification of Dr. Hull's Curculio-catcher, 25—Encouragement of the natural enemies of injurious insects, 26—Duties of a State entomologist, 27—Annual report, 27—Correspondence and other duties, 28—How to collect, preserve, and study insects, 29—Appliances for collecting, 29—Use of the umbrella, 29—The knapsack, 30—The hand-net, 30—The frame of the net, 30—The bag of the net, 31—Use of the sieve, 31—Sugaring, 32—Attracting moths by light, 32—How to kill insects, 32—The cyanide bottle, 32—Use of chloroform, 33—Entomotaxy, 34—Insect-pins, 34—How to pin insects, 34—How to mount small insects, 34—Spreading-board, 35—Drying-box, 36—Insect boxes and cabinet, 37—Mr. Lintner's boxes for Lepidoptera, 38—Substances for lining insect-boxes, 40—Preserving insects in the collection, 41—Relaxing specimens, 41—Breeding insects, 41—Breeding-cage, 42—Note-book of the collector, 43—How to transmit insects, 44—Text-books, 44.

NOXIOUS INSECTS.

NOTES OF THE YEAR 46

The codling-moth, *Carpocapsa pomonella* 46

Experiments with Wier's apple-worm trap, 46—Value of different materials for bandages, 47—Jarring, 48—Occurrence of the apple-

---

* Pages 17–27 were reprinted under title Entomology in <Rept. State Board Agric. Kansas for 1873, 1874, pp. 266–274.

1329. RILEY, C. V.—Continued.

worm in California, 49—Enemies and parasites, 49—The ring-legged Pimpla, 49—The delicate long-sting, 50—Other enemies, 51—Efficiency of the spined soldier-bug, 51—False doctrines for exterminating the codling-moth, 51.

The Colorado potato-beetle, *Doryphora 10-lineata* 52

Its comparative harmlessness in 1872, 52—New food-plants, 52—Its progress eastward up to 1872, 52—Experiments with Paris green, 53—New enemies, 53—The rust-red social wasp, 54—The rose-breasted grosbeck, 54.

The apple-twig borer, *Amphicerus bicaudatus* 54

It attacks also pear twigs, 54—It has been bred from grape-canes by Dr. Shimer, 54.

Egg of the horned Passalus, *Passalus cornutus* 55

The egg, 55—The newly hatched larva, 55—Rapid development of the insect, 55.

Egg of the common May beetle, *Lachnosterna fusca* 55

Description of the eggs and how they are deposited, 55.

Egg of the broad-necked Prionus, *Prionus laticollis* 56

Characteristics of the eggs and where they are deposited, 56.

Eggs of American tent-caterpillar, *Clisiocampa americana* 56

Correction of the figure given in Report III of the egg-belt, 56.

Counterworking the tobacco-worm, *Protoparce celeus* 56

Mr. White's method of planting the Jamestown weed among the potatoes and poisoning the blossoms thereof, 56.

THE GRAPE PHYLLOXERA, *Phylloxera vastatrix* 57

Its popular name, 57—Accounts of the unusual mortality among grape-vines in the spring of 1872, 57—Causes of this mortality given in the accounts, 59—Excessive drought and overbearing, 60—The Phylloxera is the true cause, 60—Actual proof of the Phylloxera having caused the mortality among grape-vines, 61—Influences that favored the increase of the lice in 1872, 61—Importance of a full understanding and management of the Phylloxera, 62—Its range in North America, 62—Its spread in Europe, 63—Inconstancy in the habits of the gall-lice, 63—The leaves of the Clinton vine no longer affected by the gall-lice since 1871, 63—Method of formation of the leaf-gall, 64—Relative immunity of American vines in Europe, 64—Propagating American varieties from cuttings, 65—Appreciation of American vines in Europe, 66—Careless statement published as to the immunity of *Labrusca* vine, 66—Grafting the grape-vine, 67—New theories, 67—The Phylloxera is the true cause and not the effect of the disease, 67—Mr. Laliman's theory that the insect has always existed in Europe, 68—*Oidium tuckeri* of Europe and America identical, 69—Mr. Saunders's account of the presence of *Oidium tuckeri* in America, 70—Means of contagion of the disease from one vine to another, 69—Flying capacity of the winged Phylloxera, 70—The male louse, 71—Remedies, 71—Efficacy of carbolic acid and soot, 71—Value of submersion or irrigation, 72—Sprinkling with quick-lime, ashes, etc., 72—Mr. Lichtenstein's experiments to allure the lice, 72—Experiments with carbolic acid, 73.

THE OYSTER-SHELL BARK-LOUSE OF THE APPLE, *Mytilaspis pomorum* .. 73

Its occurrence in Missouri, 74—Its appearance in Luray County, Missouri, 74—Mr. Hanan's account of its spread, 75—Its occurrence in Southern Missouri, 76—Its occurrence in Mississippi and Georgia, 78—Its appearance in Kansas, 79—It is double-brooded

1329. RILEY, C. V.—Continued.

in the South, 79—The waxy secretion of Homoptera, 80—The newly hatched louse, 80—The larval scale, 81—Development of the female scale, 81—Growth of the male scale, 82—The male louse, 83—Rare occurrence of the winged male, 84—Agamic multiplication, 85—Mode of spreading, 85—Food-plants, 86—Varieties of the apple-tree preferred by it, 86—Enemies and parasites, 87; mites, 87; *Aphelinus mytilaspidis* and Dr. Le Baron's account of its habits, 88—Easy transportation and introduction of the Aphelinus, 90—Remedies, 90—Application of oily substances, 90—Bibliographical and descriptive, 91—The generic name, 91—Signoret's classification of the *Coccidæ*, 92—Specific name, 92—Characteristics and habits of three allied species, 93—A new name necessary for our apple-tree species, 94—Description of the eggs and the winged male, 95; of the male and female scale and of the female louse, 96.

THE PINE-LEAF SCALE-INSECT, *Chionaspis pinifolii* 97

Nature of the malady caused by it, 97—Natural history of the insect, 98—The male, 99—There are two annual broods, 99—It is confined to the pines proper, 100—Natural enemies, 100; the twice-stabbed lady-bird, 100; the painted lady-bird and description of its larva, 101—Remedies, 101—Stripping the old leaves, 102—Application of powdered and liquid substances, 102.

THE HICKORY BARK-BORER, *Scolytus 4-spinosus* 103

Accounts of the damage caused by it in Missouri, 103—Habits of the European *Scolytus destructor*, 104—Various kinds of hickory attacked by the hickory bark-borer, 105—Its natural history, 105—Natural enemies, 106—Description of the three-banded Spathius, 106—Mr. Cresson's description of *Bracon scolytivorus*, 106—Remedies, 107—Description of the imago, 107—Is it different from *Scolytus 4-spinosus?* 107.

THE ROSE CHAFER, *Macrodactylus subspinosus* 108

Great damage caused by the beetle in 1872, 108—Remedy, 109—Harris's account of its natural history, 109.

THE FALSE CHINCH-BUG, *Nysius angustatus* 111

It was not known as injurious before 1872, 111—Accounts of injury done by it, 111—How it differs from the true chinch-bug, 112—Its probable natural history, 112—Description of imago, larva, and pupa, 113—Variation in the imago, 113—Its great abundance in the fall of 1872, 114.

INSECTS INJURIOUS TO THE GRAPE-VINE 114

The grape-vine apple-gall, *Cecidomyia vitis-pomum* 114

The breast bone of gall-gnat larvæ, 114—The gall mistaken for an apple, 114—Form of the gall, 115—Habits of the larva, 116.

The grape-vine filbert-gall, *Cecidomyia vitis-coryloides* 116

Appearance of the gall, 116—Larva of the gall-maker, 117.

The grape-vine tomato-gall, *Lasioptera vitis* 117

Its curious resemblance to a tomato, 117—Various shapes assumed by it, 118—The larva, 118—Enemies of the larva, 118.

The grape-leaf trumpet-gall, *Cecidomyia viticola* 118

Characteristics and occurrence of the gall, 118.

EGGS IN AND ON CANES AND TWIGS* 119

---

* Pages 119–125 were reprinted under title Insect punctures, in <Rept. State Board Agric. Kansas for 1873, 1874, pp. 274–279, figs. 47–59.

1329. RILEY, C. V.—Continued.

Probable eggs of the jumping tree-cricket, *Orocharis saltator*, 119—The egg-punctures on grape-cane, 119—Characters of the egg, 119—General appearance of the cricket, 120.

Eggs of the snowy tree-cricket, *Œcanthus niveus*, 120—Trees and shrubs attacked by this cricket, 120—The egg, 120—Habits and natural history, 120—Injury done by it, 121—The eggs mistaken by Fitch for those of the Buffalo tree-hopper, 121.

Egg-punctures of the Buffalo tree-hopper, *Ceresa bubalus*, 121—Development of the larva, 121—Characters and habits of the perfect insect, 122—Egg-punctures of some unknown tree-hopper, 122.

Egg-punctures of the frosted lightening-hopper, *Pœciloptera pruinosa*, 122—Development and habits of the insect, 122.

Egg-punctures probably of *Orchelimum glaberimum*, 123—The egg, 123—Characters and habits of the imago, 123.

Eggs of the oblong-winged katydid, *Amblycorypha oblongifolia*, 123—They have been mistaken by Harris for those of the broad-winged catydid, 123—Ovipositors and modes of egg-laying in the three katydids occurring in Missouri, 124—Increase in thickness of katydid eggs before hatching, 124.

STINGING LARVÆ 125

The potato-worm falsely considered as a stinging caterpillar, 125—General harmlessness to man of insect larvæ, 125—Stinging caterpillars in Europe and North America, 126—List of such larvæ in United States, 126—Description of larva and chrysalis of *Acronycta xylinoides*, 126.

The buck moth or maia moth, *Hemileuca maià* 127

Flight and characteristics of the moth, 127—The egg and mode of egg-laying, 128—Appearance of the full-grown larva, 129—Larval changes, 129—Color variations of the larva, 130—Habits of the young larva, 130—The sting of the larva, 131—The pupa, 131—Issuing of the moth, 132—Irregularity and retardation in development, 132; the species benefits thereby, 132—Food-plants, 132—Natural enemies, 132.

The io moth, *Hyperchiria io* 133

The male and female moth, 133—The egg, 134—The larva and its urticating power, 134—Larval changes, 135—Pupation, 135—Food-plants, 136—Parasites, 136.

THE GREEN-STRIPED MAPLE-WORM, *Dryocampa rubicunda* 137

Account of its occurrence in great numbers in Kansas, 137—Injury done by it to soft maples, 138—The egg, 138—Larval changes, 138—The chrysalis, 139—The imago, 139—Natural enemies, 139—Description of *Belvoisia bifasciata*, 140—Remedies, 141.

INNOXIOUS INSECTS.

THE HELLGRAMMITE FLY, *Corydalus cornutus* 143

The eggs, 143—Respiratory apparatus of the larva, 143—Habits of the larva when about to transform, 143—The pupa, 144—Sexual difference in the imago, 145.

THE GOAT-WEED BUTTERFLY, *Paphia glycerium* 145

The egg, 146—Habits of the larva, 146—Larval changes, 146—Transformation, 147—New food-plant, 147—Simulation of the color of the food-plant by the larva, 147—Two annual broods, 148—Hibernation of the imago, 148—Natural enemies, 149.

1329. **Riley, C. V.**—Continued.

ON A NEW GENUS IN THE LEPIDOPTEROUS FAMILY TINEIDÆ WITH REMARKS ON THE FERTILIZATION OF YUCCA, *Pronuba yuccasella*........ 150

Generic characters of *Pronuba*, 150—Description of *Pronuba yuccasella*, 151—Plants requiring the aid of insects for fertilization, 152—Fertilization of orchids, 152—Fructification of Yucca, 153—Yuccas must rely on insects for fertilization, 153—Insects frequenting Yuccas, 154—Diurnal and nocturnal habits of Pronuba, 154—How the female moth fertilizes the plant, 154—Oviposition, 155—The larva within the young fruit, 155—Description of the larva, 155—Only a small percentage of fruit not infested by the larva, 156—The larva leaves the capsule and enters the ground for hibernation, 156—Mutual adaptation of plant and insect, 156—The moth doubtless occurs wherever Yuccas grow wild, 157—Easy transportation of the cocoon, 158—Further facts regarding the fructification of *Yucca filamentosa* and *gloriosa*, 158—Yuccas seeding in Europe, 159—Range of the insect, 159—Mr. Stainton's opinion on the characters on the Yucca moth, 160.

NOTE.—Pages 1–44 were also printed as a separate, with title-page cover. <Jefferson City, Mo., 1873. S.-b. No. 19, pp. 150–173.

1330. **Riley, C. V.** New York without a State entomologist. <Moore's Rural New Yorker, 5 May, 1873. S.-b. No. 8, p. 103.

Needs of a State entomologist for New York; *Salix humilis* infested with larva of *Plectrodera scalator*.

1331. **Riley, C. V.** Tent-caterpillar of the forest. <N. Y. Tribune, 23 May, 1873. S.-b. No. 8, pp. 64–65.

Answer to inquiry of S. T. Gilbert; means against eggs of *Clisiocampa sylvatica* [= *disstria*].

1332. **Riley, C. V.** Apple-tree borer. <N. Y. Tribune, 23 May, 1873, S.-b. No. 8, p. 64.

Answer to inquiry of J. Durbin; means against *Saperda bivittata* [= *candida*].

1333. **Riley, C. V.** Punctured grape-canes. <N. Y. Tribune, 23 May, 1873. S.-b. No. 8, p. 64.

Answer to inquiry of E. Snyder; food-habits and means against *Œcanthus niveus*.

1334. **Riley, C. V.** The codling-moth. Weir's trap. <Amer. Agric., May, 1873, v. 32, p. 184, figs.

Unsatisfactory results of experiments with the Weir trap; relative value of materials used; criticism of J. S. Parker's theory for the extermination of *Carpocapsa pomonella*; this species breeds in apples, wild crabs, pears, peaches, and plums; figures females and the abdomen of the males of *Pimpla annulipes* and *Macrocentrus delicatus* parasitic upon the apple-worm.

1335. **Riley, C. V.** Influence of extreme cold on the Curculio. <Gardener's Mo. and Hortic., May, 1873, v. 15, pp. 137–139.

Critical review of T. T. Southwick's article of same title; extract from 3d Ann. Rept. State Ent. Mo.

1336. RILEY, C. V. On a new genus in the lepidopterous family *Tineidæ*, with remarks on the fertilization of *Yucca.* <Trans. Acad. Sci. St. Louis, June, 1873, v. 3, pp. 55–64, 2 figs. Reprinted, with omissions and slight changes, from <5th Ann. Rept. State Ent. Mo., 18 April, 1873, pp. 150–160, figs. 74–75. Review by P. C. Zeller: <Verh. k.-k. zool.-bot. Ges. Wien, 1876, Jahrg. 1875, Bd. 25, pp. 340–342. Reply to Zeller: <Trans. Acad. Sci. St. Louis, January–March, 1876, v. 3, pp. 325–326.

Description and figures of *Pronuba* n. g. and of larva and imago of *P. yuccasella* n. sp. See No. 1329 for synopsis of contents.

1337. RILEY, C. V. Supplementary notes on *Pronuba yuccasella.* <Trans. Acad. Sci. St. Louis, June, 1873, v. 3, pp. 178–180, fig. 3. Extract: <6th Ann. Rept. State Ent. Mo., April, 1874, pp. 131–135, fig. 3.

Descriptions and figures of male and female pupa of *Pronuba yuccasella*; hibernation, imagination, seasons, and distribution of the same; species of *Yucca* pollinated by it.

1338. RILEY, C. V. [To destroy the cotton-worm.] <Ill. Jour. of Agric., June, 1873. Reprint: <Colman's Rural World, 1873; <Rural Alabamian, July, 1873, v. 2, pp. 289–293; <Mobile Register, 1873; <Farmer's Advocate, 1873. Extract: <6th Ann. Rept. State Ent. Mo., 1874, pp. 17–18.

Ravages of *Aletia argillacea* [=*xylina*] in the cotton fields of Southern United States; inefficiency of measures hitherto employed against them; recommends the use of Paris green; directions for its use; natural history, description of egg, larva, and imago of the *Aletia*; hibernation of the imago.

1339. RILEY, C. V. [Imported plants and insects.] <Trans. Acad. Sci. St. Louis, July, 1873, v. 3, pp. 42–43 Proc.

Verbal communication; inequality of the exchange of plants and insects between Europe and North America; extent and causes of the same.

1340. RILEY C. V. [Mimicry and protective resemblances.] <Trans. Acad. Sci. St. Louis, July, 1873, v. 3, pp. 44–45 Proc.

Verbal communication; mimicry of *Danais archippus* by *Limenitis disippus* and consequent greater abundance of the latter than of *L. ursula.*

1341. RILEY, C. V. [Silk-worms fed with osage orange.] <Trans. Acad. Sci. St. Louis, July, 1873, v. 3, p. 47 Proc.

Verbal communication; successful rearing of silk-worms on *Maclura aurantiaca*; exhibition of cocoons made by these worms.

1342. RILEY, C. V. [On the cause of deterioration in some of our native grape-vines.] <Trans. Acad. Sci. St. Louis, July, 1873, v. 3, pp. 51–52 Proc.

Verbal communication; abstract from 4th Ann. Rept. State Ent. Mo.; failure of grape-vines attributed largely to the ravages of *Phylloxera vastatrix.*

1343. RILEY, C. V. [Insects affecting the ailanthus.] <Trans. Acad. Sci. St. Louis, July, 1873, v. 3, pp. 53–54 Proc.

Mentions *Œta compta* [=*punctella*] and *Attacus cynthia.*

1344. RILEY, C. V. [Posthumous papers by B. D. Walsh.] <Trans. Acad. Sci. St. Louis, July, 1873, v. 3, p. 77 Proc.

Verbal communication; disposition of sundry entomological manuscripts left by B. D. Walsh.

1345. RILEY, C. V. [Remarks on *Simulium piscicidium*.] <Trans. Acad. Sci. St. Louis, July, 1873, v. 3, p. 79 Proc.

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1346. RILEY, C. V. [On *Antherœa yama-mai* as a silk-producer.] <Trans. Acad. Sci. St. Louis, July, 1873, v. 3, p. 84 Proc.

Verbal communication; superiority of *Antherœa yama-mai* to other silkworms tried as substitutes for *Sericaria mori.*

1347. RILEY, C. V. [On galls growing on wild sage.] <Trans. Acad. Sci. St. Louis, July, 1873, v. 3, p. 84 Proc.

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1353. **Riley, C. V.** Cotton caterpillar.—Boll-worm. <Rural Alabamian, October, 1873. S.-b. No. 16, p. 121.

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TABLE OF CONTENTS 3
PREFACE 6

NOXIOUS INSECTS.

NOTES OF THE YEAR 9
The codling-moth, *Carpocapsa pomonella* 9
Failure of the apple crop in 1873, 9—Dr. Le Baron's observations on the habits of the worm, 9—Proportion of worms leaving the fruit before it falls, 10—How it affects pears, 10—Time and method of using bandages, 10—Westward spread of the insect, 10.
The Colorado potato-beetle, *Doryphora 10-lineata* 11
How it has affected the price of potatoes, 11—New food-plants, 11—Its progress eastward during 1873, 12—Improved methods of using Paris green, 13—Device for jarring off the bugs, 14—European publications on the insect, 15—Danger of its introduction into Europe, 15—Precautionary measures to be taken in Europe, 16.
The cotton-worm, *Aletia xylina* 17
Paris green suggested as remedy, 17—Address before the National Agricultural Congress, 17—Mr. Glover's summary on experience with Paris green, 19—Experiments with the poison, 19—Johnson's sprinkling machine, 20—Patents on Paris green, 20—The Royal mixture, 21—Hibernation of the insect, 22—Natural enemies, 23—Geographical range, 23—Position of the moth when alighting, 24.
The canker-worm, *Paleacrita vernata*; *Anisopteryx pometaria* 24
Dr. Le Baron's summary of remedies, 24—Mr. Milliken's experience with the rope and tin trap, 25—The Paris green remedy, 26—A new trough, 26—Birds which destroy the worm, 27—Mr. Mann's observations on the insect, 28—Two species have hitherto been confounded, 28—The English sparrow and the increase of the white-marked tussock-moth, 29.

1363. RILEY, C. V.—Continued.

INSECTS INJURIOUS TO THE GRAPE-VINE 30

The grape Phylloxera, *Phylloxera vastatrix*.......................... 30

The term "Phylloxera," 30—Bibliographical history, 30—Characters of the genus and its position in the system, 33—Biological history, 33—Different forms which the insect assumes, 33—The gall-inhabiting form, 34—The root-inhabiting form, 38—Balbiani's discovery of the true sexual individuals and the winter egg of *Phylloxera quercus*, 41—The winter egg not essential to the winter life of the grape Phylloxera, 42—Polymorphism in Phylloxera, 43—Conclusive proof of the identity of the root- and gall-lice, 44—Practical considerations, 44—The more manifest and external effects of the disease, 44—Mode of spreading, 45—Swarming of winged specimens of *Phylloxera caryæfoliæ*, 45—Power of flight in the grape Phylloxera, 45—Spread of the disease through the winged females, 46—Susceptibility of different vines to the disease, 46—Practical importance of knowing the more resisting and more susceptible vines, 46—List of the cultivated species and varieties of vines indicating their relative susceptibility to Phylloxera, 47—Prophylactic means of coping with the disease, 48—Grafting the more susceptible on to the roots of resisting vines, 48—Other preventive measures, 50—Natural enemies, 50—Insect enemies of the gall-louse, 50—Enemies of the root-louse, 52—The Phylloxera mite, 52—Different forms assumed by mites in their development, 52—*Hoplophora arctata*, 53—Peculiarities of the *Oribatidæ*, 54—Direct remedies, 55—Submersion a perfect remedy, 55—Application of pure insecticides without satisfactory results, 56—Range of the insect in America, 57—Injury caused by it in America, 58—Reasons why the insect is more injurious in Europe, 59—False theories, 60—The Phylloxera is the cause and not the effect of the disease, 60—It is a native American insect and has been imported into Europe, 62—It is peculiar to the grape-vine, 63—The American oak Phylloxera and its natural history, 64—Conclusion, 65.

Appendix and notes to the article on grape Phylloxera.................. 66

Diagnosis of *Phylloxera vastatrix*, 66—Influence of the insect's puncture, 67—The supposed male of the gall-louse, 67—The non-cultivation of the Clinton grape, 67—Transient nature of the leaf-galls, 68—Constancy of the differences between the forms assumed by the insect, 68—Supposed sexual individuals, 68—Number of generations annually produced, 69—Number of molts, 69—Transplanting root-lice on to the leaves, 69—Nature of the swelling on the roots produced by Phylloxera, 70—The true grape-vines of the United States, by Dr. G. Engelmann, 70—Exceptional instances where the European vine has succeeded in America, 76—Grafting the more susceptible on to the roots of the resisting varieties, 78—Descriptions of *Tyroglyphus phylloxeræ* and *Hoplophora arctata*, 81—Efficacy of inundating the vineyards, 82—Facts showing that the disease of grape-vines in America is principally caused by Phylloxera, 82—Description of *Phylloxera rileyi*, 86—The true sexual individuals and the winter egg, 86.

The blue caterpillars of the vine.................................. 87

1. The grape-vine Epimenis, *Psychomorpha epimenis*, 87—Habits and characters of the larva, 87—Description of larva and chrysalis, 88.
2. The beautiful wood nymph, *Eudryas grata*, 88—Characters and food-plants of the larva, 88—The moth and the egg, 89—Description of the egg and larva, 89—Of the chrysalis, 90.

1363. Riley, C. V.—Continued.

Insects injurious to the Grape-vine—Continued.

3. The pearl wood nymph, *Eudryas unio*, 90—Its larva almost undistinguishable from that of the foregoing species, 90—Food-plant, 91—Distinguishing characters of the moth, 91—Mr. Lintner's description of the larva, 92—Mr. Lintner on the difference between the larva of *Eudryas grata* and *E. unio*, 93.

4. The eight-spotted forester, *Alypia octomaculata*, 94—Description of the larva, 94; chrysalis and imago, 95.

Summary, 95—Comparison of the larvæ of these four species, 95—Remedies 96.

The red-legged ham-beetle, *Necrobia rufipes* 96

Its popular name, 96—It has been the cause of an interesting lawsuit, 96; entomological information necessary to a just verdict, 98—Another case before a jury requiring botanical knowledge, 98—Injury caused by the beetle in St. Louis, 99—The eggs, and how they are deposited, 99—The larva and its habits, 99—The pupa, 99—Prevention, 100—Other species associated with it, 100—Habits of other species of *Cleridæ*, 101—How *Necrobia ruficollis* saved the life of Latreille, 101—Description of the larva of *Necrobia rufipes*, 101—Description of the pupa, 102.

The clover-hay worm, *Asopia costalis* 102

Its geographical distribution, 102—It has probably been imported from Europe, 101—Its past history and accounts of damage caused by it, 102—Its natural history, 105—Remedies, 105—Description of larva and chrysalis, 106; of the imago, 107—Its allied congener, *Asopia olinalis*, 107.

The legged maple-borer, *Ægeria acerni* 107

The burrows of the larva, 108—Appearance of the moth, 108—Remarks on the nomenclature of the species, 108—Injury caused by it to maples, 109—It attacks only trees already injured by some cause or another, 109—Remedies, 110—Description of imago, larva, and pupa, 110.

The raspberry root-borer, *Bembecia marginata* 111

Work of *Oberea perspicillata* in canes of raspberry and blackberry, 111—Injury caused by the root-borer, 111—General appearance and habits of the worm, 112—Description of imago and larva, 113.

The Northern brenthian, *Eupsalis minuta* 113

Its occurrence and distribution, 113—Characteristics of the beetle, 114—Fighting habits of the males, 114—How the male assists the female in ovipositing, 115—How much time is required for the transformations of the insect, 115—Habits of the larva, 115—Description of the larva, 115; of the pupa, 116—Real position of the brenthians in the system, 116—The specific and generic names, 116—How another larva has been mistaken for that of the Northern brenthian, 117—Description of this larva, which evidently belongs to the *Tenebrionidæ*, 118.

The jumping sumach-beetle, *Blepharida rhois* 118

Sumach industry in Europe and America, 118—Species of sumach possessing economic value, 119—Appearance and habits of the beetle, 119—The egg-masses, 120—Development and habits of the larva, 120—Transformation, 120—The two annual broods, 120—Injury caused by it to the sumachs, 121—Geographical range, 121—Remedies, 121—Description of larva and pupa, 121—Variations of the beetle, 122.

1363. RILEY, C. V.—Continued.

BENEFICIAL INSECTS.

THE UNADORNED TIPHIA OR WHITE GRUB PARASITE, *Tiphia inornata* .. 123
Other enemies of the white-grub, 123—Cocoon and larva of *Tiphia*, 123—It is undoubtedly a parasite of the white-grub, 124—Characters of the genus *Tiphia*, 124—Habits of *Tiphia femorata*, 124—Habits of the Tiphia larva, 124—Characters of the Unadorned Tiphia, 125—Beetle parasitic upon it, 125—Description of larva and imago, 126—The species has been described under three different names, 126.

INNOXIOUS INSECTS.

THE DOMINICAN CASE-BEARER, *Coscinoptera dominicana*............... 127
Characters of the beetle, 127—Mode of oviposition, 128—Oviposition of *Chlamys plicata*, 128—The young larva and its food-habits, 129—The case of the larva, 129—Characters of the larva, 130—Time required for its development, 130.

THE YUCCA MOTH, *Pronuba yuccasella* 131
Its natural history completed, 131—Description of the chrysalis, 131—Hatching of the chrysalis, 132—Method of oviposition, 133—Oviposition is followed by pollination, 134—The egg in the young fruit and the embryo larva, 134—It is the only insect that can well fertilize the Yuccas, 135.

HACKBERRY BUTTERFLIES.. 136
The European purple Emperor, 136—Insufficient former account of their earlier states, 136—Species of Celtis in Missouri, 137.

The eyed Emperor, *Apatura celtis* 137
The full-grown larva, 137—Habits of the larva, 138—Pupation, 138—The imago, 139—The egg and the young larva, 139—Two annual broods, 139—Hibernation of the young larva, 140.

The tawny Emperor, *Apatura clyton* 140
How it differs from the eyed emperor, 140—The egg, 141—Larval changes and habits, 141—Egg parasite, 142.

Bibliographical 142
The generic name, 142—The specific names of the two species, 143—Fabricius's original description of *lycaon* and *herse*, 144—Other species of the genus in the United States, 145—On the validity of *alicia*, 145—Descriptions of the earlier states of both species, 146—Their popular names, 148—The scientific specific names, 149.

KATYDIDS 150
General considerations, 150—Spring in Europe and America, 151—Stridulating noise produced by crickets and grasshoppers, 152—Sounds inaudible to man, 152—Grasshoppers, katydids, locusts, 153—Habits and general appearance of our katydids, 154—They oviposit above ground, 154—Their ovipositors not rudimental, 155.

The angular-winged katydid, *Microcentrum retinerve* 155
It is the most common species in Missouri, 155—General character of the insect, 155—The eggs, 155—Erroneous statement concerning the egg, 156—How the female deposits the eggs, 156—Number of eggs laid by the female, 158—Hatching of the larva, 158—Food of the larva, 158—Changing from the pupa to the perfect

1363. **Riley**, C. V.—Continued.

state, 159—Its song, 159—It is capable of domestication to a certain degree, 160—Description of the immature states, 161—Natural enemies, 162—The back-rolling Wonder, an egg-parasite, 162—Curious habit of the female *Antigaster*, 162—Description of *Antigaster mirabilis*, 163—Striking sexual differences, 163.

The narrow-winged Katydid, *Scudderia curvicauda* 164

Distinguishing characters, 164—Method of oviposition, 165—The egg, 165—Its song, 166—Description of larva and pupa, 166.

The broad-winged Katydid, *Cyrtophyllus concavus* 167

It is the true katydid, 167—Distinguishing characters, 167—Mode of oviposition as observed in confinement, 167—Mr. Jaeger's erroneous statement regarding the oviposition, 168—Its song, 168.

The oblong-winged katydid, *Amblycorypha oblongifolia* 169

It has not yet been found in Missouri, 169—Distinguishing characters, 169—The eggs not yet known, 169—Abnormal female specimen, 169.

1364. **Riley**, C. V. The Colorado potato-beetle abroad. <N. Y. Tribune, 1 April, 1874. S.-b. No. 10, p. 37.

Criticism of some articles on *Doryphora decemlineata* published in Europe; danger of the importation of the insect into Europe, and suggestion of means to prevent such introduction.

1365. **Riley**, C. V. Cabbage-lice. <N. Y. Tribune, 8 April, 1874. S.-b. No. 10, pp. 33–34.

Answer to letter from Mrs. M. Walker; means against *Aphis brassicæ.*

1366. **Riley**, C. V. Peach-borers. <N. Y. Tribune, 8 April, 1874. S.-b. No. 10, p. 34.

Answer to letter from W. J. Clary; a peach-tree whose base was surrounded by ice in winter was free from borers; this observation of slight significance.

1367. **Riley**, C. V. Apply soap. <N. Y. Tribune, 8 April, 1874. S.-b. No. 10, p. 34.

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1368. **Riley**, C. V. Meadow enemy. <N. Y. Tribune, 8 April, 1874. S.-b. No. 10, p. 34.

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1369. **Riley**, C. V. A remedy for the cotton-worm. <N. Y. Tribune, 22 April, 1874. S.-b. No. 10, pp. 25–26. Reprint: <Vicksburg Herald, 1 May, 1874.

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1370. **Riley**, C. V. Descriptions of two new subterranean mites. <Trans. Acad. Sci. St. Louis, 25 April, 1874, v. 3, pp. 215–216, figs. 8–9.

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1371. Riley, C. V. The habits of *Polistes* and *Pelopœus.* <Amer. Nat., April, 1874, v. 8, pp. 229–231.

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1372. Riley, C. V. The plum Curculio; natural history and how to catch him. <N. Y. Semi-weekly Tribune, 1 May, 1874. S.-b. No. 10, pp. 18–19; 38–40. Extract: <Cultivator and Country Gentleman, 14 May, 1874, v. 39, p. 310. <New England Farmer, 18 July, 1874, [v. 53,] n. s., v. 29, p. 1. See: <Indust. Record, 5 February, 1875. S.-b. No. 16, pp. 46–48.

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1373. Riley, C. V. The apple-worm; natural history; remedies. <N. Y. Tribune, 20 May, 1874. S.-b. No. 10, pp. 8–9; 37–38.

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See No. 1363 for synopsis of contents.

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1376. Riley, C. V. More about the grape-vine pest. <Popular Sci. Monthly, June, 1874, v. 5, pp. 158–170, 10 figs. Reprinted, with changes and omissions, from <6th Ann. Rept. State Ent. Mo., April, 1874, pp. 47–60, 64–65.

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Answer to inquiry of R. H. Day; occurrence of an undescribed *Lecanium* sp.? on the leaves of *Magnolia fuscata.*

1378. Riley, C. V. Confounding friend with foe. <N. Y. Tribune, 15 July, 1874, 2 figs. S.-b. No. 10, p. 24.

Answer to inquiry of E. J. Day; usefulness of *Arma* [=*Podisus*] *spinosus* figure of the same. Injury to plums by *Anthonomus prunicida* [=*Coccotorus scutellaris*]; figure of and means against the same.

1379. Riley, C. V. The Colorado potato-beetle in New York. <N. Y. Tribune, 15 July, 1874. S.-b. No. 10, p. 24.

Answer to letter from J. H. P.; eastern limit of the range of *Doryphora decemlineata* in 1873 and 1874.

1380. RILEY, C. V. Large willow-worm. <N. Y. Tribune, 15 July, 1874. S.-b. No. 10, p. 24.

Answer to letter of J. H. P.; food-plants, habits, and means against *Cimbex laportei* [= *americana*].

1381. RILEY, C. V. Black blister-beetles on potatoes. <N. Y. Tribune, 22 July, 1874. S.-b. No. 10, p. 17.

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1382. RILEY, C. V. Pear-tree slug. <N. Y. Tribune, 22 July, 1874. S.-b. No. 10, p. 17.

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1383. RILEY, C. V. The plug-ugly theory. <N. Y. Tribune, 22 July, 1874. S.-b. No. 10, p. 17.

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1384. RILEY, C. V. Cockscomb elm-gall. <N. Y. Tribune, 22 July, 1874. S.-b. No. 10, p. 17.

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1385. RILEY, C. V. Pitcher-plant insects. <Hartford [Conn.] Daily Courant, 15 August, 1874, v. 38, No. 195, p. 1. See: <N. Y. Tribune Extra: Lecture and Letter series No. 21, August, 1874, pp. 56–58, fig. Reprint: <Nature, 8 October, 1874, v. 10, pp. 463–465, figs. 1–2. Abstract: <Sci. Amer., 12 September, 1874 [v. 45], n. s., v. 31, p. 168. <Amer. Nat., November, 1874, v. 8, pp. 684–687. Reprint of abstract: <Hardwicke's Science Gossip, December, 1874, v. 10, pp. 272–275, figs. 179–182. Extract: <Ca. Ent., November, 1874, v. 6, pp. 207–214, figs. 25–26. Reprint of extract: <Proc. Amer. Assoc. Adv. Sci. for 1874, June, 1875, v. 23, pp. 18–25, 2 figs. Separate of reprint: <Salem, Mass., December, 1874, pp. 18–25, figs.

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1386. RILEY, C. V. On the habits and transformations of *Canthon hudsonias*, Forst.; the common "tumbledung." <Hartford [Conn.] Daily Courant, 18 August, 1874, No. 11162, v. 38, No. 197, p. 2. Reprint: <N. Y. Tribune Extra: Lecture and Letter series, No. 21, August, 1874, pp. 75–76.

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Habits and hypermetamorphosis of *Meloe angusticollis*; probably parasitic food-habits of young larvæ of *Epicauta* and *Henous*; the imagos phytophagous.

1388. RILEY, C. V. Humming-bird moths caught by the tongue. <Moore's Rural New Yorker, 29 August, 1874, v. 30, p. 140.

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1394. RILEY, C. V. Lecture on entomology. <Trans. Ill. Hortic. Soc. for 1873, 1874, n. s., v. 7, pp. 172–178, figs. 1–3. Reprint: <3d Ann. Rept. Sec. State Pomol. Soc. Mich. for 1873, 1874, pp. 443–448. Abstract: <Rept. U. S. Commis. Agric. for 1873, 1874, [30 March, 1875], pp. 389–390.

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1395. RILEY, C. V. "Walking-sticks or specters" becoming injurious. <N. Y. Weekly Tribune, 11 November, 1874, fig. S.-b. No. 23, p. 103.

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1396. RILEY, C. V. Entomological notes. <Sci. Amer., 5 December, 1874 [v. 45], n. s., v. 31, p. 356.

Pemphigus imbricator found on beech; vesicatory potato-beetles, *Meloidæ*; cow manure and cow urine one of the earliest supposed remedies for *Phylloxera*.

1397. Riley, C. V. The bark-louse. <Beach, A. E. The Science Record for 1874, N. Y., 1874, p. 356.

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1398. Riley, C. V. Codling-moth heresies. <N. Y. Tribune, 2 January, 1875. S.-b. No. 13, p. 163.

Criticism of paper of S. B. Peck; *Carpocapsa pomonella* confines its attacks to one apple and does not enter the ground.

1399. Riley, C. V. Shall we scrape our trees? <N. Y. Tribune, 6 February, 1875. S.-b. No. 10, p. 10.

Careful scraping of trees early in spring is beneficial as a safeguard against the attacks of many injurious insects.

1400. Riley, C. V. What are army-worms? <N. Y. semi-weekly Tribune, 6 February, 1875.

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1401. Riley, C. V. The hickory bark-borer, *Scolytus caryæ*. <Colman's Rural World, 6 February, 1875. S.-b. No. 17, p. 105.

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1402. Riley, C. V. Genuine *vs.* bogus chinch-bugs. <N. Y. Tribune, 10 February, 1875, figs. S.-b. No. 10, p. 10.

Answer to inquiry of C. H. Cushing; food-habits and figures of *Nysius destructor* [=*angustatus*] and *Blissus leucopterus*; larva of *Deilephila lineata* feeds on purslane.

1403. Riley, C. V. Remedies for Phylloxera. <N. Y. Tribune, 10 February, 1875. S.-b. No. 10, p. 22.

At present no insecticide is effective against *Phylloxera vastatrix*; grafting of more susceptible varieties on the roots of the least susceptible advised.

1404. Riley, C. V. Newest facts of grape Phylloxera. <N. Y. Tribune, 10 February, 1875. S.-b. No. 10, pp. 21–22.

Succession of different forms of individuals in the cycle of development of *Phylloxera* described; seasons at which the different forms appear; places in which eggs are laid by the winged females.

1405. Riley, C. V. Is the Colorado beetle poisonous? <N. Y. Weekly Tribune, 17 February, 1875. S.-b. No. 10, p. 9.

Insists upon the poisonous nature of the fumes from scalded or burning masses of *Doryphora decemlineata*, in opposition to statements by Prof. T. J. Burrill.

1406. Riley, C. V. Notes of Phylloxera. <N. Y. Tribune, 4 March, 1875. S.-b. No. 10, pp. 20–21.

Critical review of A. S. Fuller's "Distribution of the grape-louse;" maintains the specific identity of the so-called gall-inhabiting and root-inhabiting forms of *Phylloxera*, and the North American origin of this insect.

1407. [Riley, C. V.] The Colorado potato-beetle abroad. <N. Y. Weekly Tribune, 17 March, 1875. S.-b. No. 10, pp. 14–15.

Statement and criticism of measures adopted by several European Governments to prevent the introduction of *Doryphora decemlineata* into their countries.

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1409. RILEY, C. V. Description of a new species of *Agrotis*. <Proc. Bost. Soc. Nat. Hist., March, 1875, v. 17, pp. 286–288.

Description of *Agrotis morrisoniana* n. sp. [p. 286].

1410. RILEY, C. V. On the summer dormancy of the larva of *Phyciodes nycteis*, Doubleday, with remarks on the natural history of the species. <Proc. Amer. Assoc. Adv. Sci. for 1874, 4 June, 1875, v. 23, pp. 108–112. Separate: <Salem, Mass., March, 1875, pp. 108–112. Abstract: <Hartford [Conn.] Daily Courant, 18 August, 1874, No. 11162, v. 38, No. 197, p. 2. See: <N. Y. Tribune Extra: Lecture and Letter series, No. 21, August, 1874, p. 75.

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1411. RILEY, C. V. Descriptions of two new moths. <Trans. Acad. Sci. St. Louis, 1 February [March], 1875, v. 3, pp. 240–242, figs. 12–13.

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1412. RILEY, C. V. The climate for Doryphora. <N. Y. Tribune, 2 April, 1875. S.-b. No. 10, p. 16.

Comments on letter from D. L. Garver; *Doryphora decemlineata* would be likely to thrive as well in the climates of Europe as in North America; its transportation across the ocean is not improbable.

1413. RILEY, C. V. [On an *Acridium* eaten out by ants.] <Trans. Acad. Sci. St. Louis, 6 April, 1875, v. 3, p. 102 Proc.

Verbal communication; inner soft parts of an *Acridium americanum* eaten out by *Myrmica minuta*.

1414. RILEY, C. V. [On the chrysalis of *Pronuba yuccasella*.] <Trans. Acad. Sci. St. Louis, 6 April, 1875, v. 3, p. 106 Proc.

Verbal communication; adaptation of pupa of *Pronuba yuccasella* to its needs of prying its ways through the soil.

1415. RILEY, C. V. [On regulating sex in insects.] <Trans. Acad. Sci. St. Louis, 6 April, 1875, v. 3, p. 108 Proc.

Verbal communication; critical review of Mrs. Treat's "Controlling sex in butterflies"; female insects need more nourishment than the males, but sex is determined in all animals at conception.

1416. RILEY, C. V. [On the peculiarities of *Nephila plumipes*.] <Trans. Acad. Sci. St. Louis, 6 April, 1875, v. 3, p. 109 Proc.

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1417. RILEY, C. V. [On the peculiarities of the Mexican honey-ant.] <Trans. Acad. Sci. St. Louis, 6 April, 1875, v. 3, p. 109 Proc.

Verbal communication; structural and functional division of the neuters of *Myrmecocystus mexicanus* into two distinct kinds.

1418. Riley, C. V. [On the peculiarities of *Physianthus albens*.] <Trans. Acad. Sci. St. Louis, 6 April, 1875, v. 3, p. 109 Proc.

Verbal communication; the flowers of *Physianthus albens* so constructed as to hold large *Sphingidæ* fast by the tongue.

1419. Riley, C. V. [On the capture of moths by *Physianthus albens*.] <Trans. Acad. Sci. St. Louis, 6 April, 1875, v. 3, p. 115 Proc. Reprinted, with changes, from <Moore's Rural New Yorker, 29 August, 1874, v. 30, p. 140.

Verbal communication; method of capture of insects, particularly moths, by the flowers of *Physianthus albens*; records the capture of a number of *Noctuidæ* and of *Sphingidæ*, especially *Deilephila lineata*; *Nerium oleander* and *Œnothera grandiflora* are said to capture Sphinx-moths in Europe.

1420. Riley, C. V. [On the Yucca borer.] <Trans. Acad. Sci. St. Louis, 6 April, 1875, v. 3, p. 139 Proc.

Verbal communication; entomological interest attaching to the Yucca; abode and synonymy of *Megathymus yuccæ*.

1421. Riley, C. V. [New biological facts regarding the grape Phylloxera.] <Trans. Acad. Sci. St. Louis, 6 April, 1875, v. 3, pp. 147–148 Proc.

Sequence of development of certain forms of *Phylloxera*; sexual forms of three species of *Phylloxera* obtained; alleged discovery by J. Lichtenstein of the winged form of *P. vastatrix* on *Quercus coccifera* in Europe, discredited, and this form considered by E. G. Balbiani as a new species, named *P. lichtensteinii*.

1422. Riley, C. V. [On the connection of locust invasions with the occurrence of drought.] <Trans. Acad. Sci. St. Louis, 6 April, 1875, v. 3, p. 163 Proc.

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1423. Riley, C. V. Seventh annual report on the noxious, beneficial, and other insects of the State of Missouri, made to the State Board of Agriculture pursuant to an appropriation for this purpose from the legislature of the State. <10th Ann. Rept. State Board of Agric. for 1874, April, 1875, pp. 7 + 196 + 4, 40 figs. Separate: <Jefferson City, Mo., April, 1875, pp. 7 + 196 + 4, 40 figs.

Preface III
Table of Contents VII

NOXIOUS INSECTS.

The Colorado Potato-beetle, *Doryphora 10-lineata* 1
Its gradual spread eastward, 1—It reached the Atlantic during the year 1874, 1—Injuries done during the year 1874, 2—Alarm about it in Europe, 3—Prohibiting the importation of American potatoes by European governments, 3—The insect probably introduced into Europe in the perfect form, 3—It would doubtless thrive in Europe if imported, 4—Its ravages exaggerated and underrated, 5—On the safety and advisability of the use of Paris green, 8—Past experience with the poison, 10—Influence of Paris green on the plant and on the soil, 11—Influence of the green on

1423. RILEY, C. V.—Continued.

THE COLORADO POTATO-BEETLE—Continued.

man indirectly through the soil or through the plant, 13—The beetle eats as well as the larva, 14—It passes the winter as imago, 14—New food-plants, 14—New means of destruction, 15—The Gray sprinkler, 15—The proper scientific name of the beetle, 16—Mr. Carrière's ridiculous statements, 17.

THE CHINCH-BUG, *Blissus leucopterus* 19

Its disastrous work in 1874, 19—Circular distributed among farmers, 19—Appearance and transformations of the chinch-bug, 20—The short-winged form, 20—Description of the chinch-bug and its earlier states, 21—Its past history in America 22—Its past history in Missouri, 22—Destructive powers of the chinch-bug, 24—Its injuries in 1874, 24—Its injuries in Missouri in 1874, 25—Food-plants, 26—Time required for the complete development of various insects, 27—Number of annual broods, 27—Its rapid increase, 28—Where the eggs are laid, 28—Flight of the chinch-bug, 29—Its migrations on foot, 30—Heavy rains destructive to it, 30—Direct remedies, 31—Irrigation, 31—Preventive measures, 32—Burning, 32—Rolling, 33—Manuring and early sowing, 34—Mixing seed, 34—Preventing the migration of the bugs from one field to another, 35—Importance of winter work and combined action, 36—Other possible remedies, 37—Abstaining from the cultivation of grains 38—Natural enemies, 38; lady-birds, 39; lace-wing fly and habits of its larva, 40; the insidious flower-bug and the many-banded robber, 41—Birds destructive to the chinch-bug, 41—Discussion of other proposed remedies and preventive measures, 41—The chinch-bug injurious to stock, 43—Prognosticating, 44—Unnecessary fears, 44—Bogus chinch-bugs, 45—The false chinch-bug, 46—The insidious flower-bug and the ash-gray leaf-bug, 47—The flea-like negro-bug, 48—Recapitulation, 49.

Appendix to the article on the chinch-bug 51

List of correspondents who replied to the circular, 51—Questions answered by correspondents, 52—Answers given by correspondents, 53.

THE FLAT-HEADED APPLE-TREE BORER, *Chrysobothris femorata* 71

Extent of its ravages in fruit and shade trees, 71—Its natural history, 72—Natural enemies, 73—Chalcid larva, 74—The cherished Bracon, 75—The useful Labena, 75—Ants, 76—Remedies, 76—Keeping young trees vigorous and healthy, 77—Coating the trunks and larger branches with soap and other greasy substances, 77—Scraping, 78—Wrapping wire gauze around the trunk, 79—Cutting out the newly-hatched larva, 79.

CANKER-WORMS, *Paleacrita vernata*; *Anisopteryx pometaria* 80

Confusion regarding the two species of canker-worms, 80—Distinguishing characters of the spring canker-worm, 80—Description of egg, larva, and chrysalis of *Anisopteryx vernata*, 82—How the fall canker-worm differs from the preceding, 83—Description of egg, larva, and chrysalis of *Anisopteryx pometaria*, 84—Practical importance of distinguishing the two species, 85—Comparative description of the spring and fall canker-worms, 86—Conclusion, 88—Extracts from the original essay on the canker-worm by W. D. Peck, 89.

THE GRAPE PHYLLOXERA, *Phylloxera vastatrix* 90

Completion of its natural history, 90—The true sexual individuals discovered, 91—Epitome of the life-history of the grape Phyllox-

1423. RILEY, C. V.—Continued.

THE GRAPE PHYLLOXERA—Continued.

era, 91—Different forms presented by the species, 93—Its power to change its habit, 93—Specific identity of the gall- and root-louse, 94—Untrustworthy experiments made by the Department of Agriculture, 95—Proof of the identity of the two forms, 95—The gall-louse is but a transient form, 96—Where do the winged females lay their eggs? 96—The winged female lays the egg wherever she is carried by the wind, 97—Particular part of the vine chosen by the winged female for laying her eggs, 98—The true sexual individuals, 98—Injury done by Phylloxera in America during the year 1874, 99—Range of the insect in America, 101—Does it occur in South Carolina and Georgia? 102—The Phylloxera in California, 103—Injury done during the year 1874 in France, 103—Its spread in Europe, 104—Direct remedies, 105—Natural enemies, 106—Susceptibility of different varieties of grape-vine, 106—Grafting as a means of counteracting the work of Phylloxera, 108—Underground grafting, 109—Methods of grafting above ground, 112—Roots to use as stock, 115—Varieties to graft, 116—American grape-vines abroad, 116.

Appendix to the article on grape Phylloxera 117

Synopsis of the American species of the genus Phylloxera, 117—The American oak Phylloxera, 118—Its natural history, 119—Description of *Phylloxera rileyi* and the different forms presented by it, 119—Further points in its life history, 120.

THE ROCKY MOUNTAIN LOCUST, *Caloptenus spretus* 121

Its natural history, 121—Method of egg-laying, 121—The egg, 122—The newly-hatched locust and its development, 122—Where the eggs are laid by preference, 123—The invading swarms are formed by a single species, 124—Difference between the Rocky Mountain and the red-legged locusts, 125—Mr. Thomas's description of the red-legged locust, 126—Variations, 126—Measurements of *Caloptenus femur-rubrum*, 127—Description of *Caloptenus spretus* and of its larva and pupa, 129—Measurements of *Caloptenus spretus*, 130—Summing up the difference between the two species, 132—Chronological history, 132—Locust invasions in the Old World, 132—Accounts of earlier locust invasions in America, 133—Chronological history of the Rocky Mountain locust, 134—Earlier invasions, 135—Data regarding the invasion of 1867, 137—The invasion of 1873, 141—The invasion of 1874, 143—The invasion of 1874 in Missouri, 144—Questions addressed to correspondents in each county in Missouri regarding the locust, 144—Summary of the answers given by correspondents, 145—The invasion of 1874 in Kansas, 148—In Nebraska, 151—In Iowa and Minnesota, 153—In Colorado, 154—In Dakota and Manitoba, 155—Flight and ravages of a locust swarm, 156—Food-plants, 158—Time of appearance of invading swarms, 160—Eastern limits of locust invasions, 161—Native home of the species, 162—Explanation of the migratory instinct, 164—This locust can not thrive in the Mississippi Valley, 164—It is an subalpine insect, 165—What injury may be expected in Missouri in 1875, 166—Ravages of migratory locusts in the Atlantic States, 167—Description of the Atlantic migratory locust, 169—Differences between *Caloptenus spretus*, *differentialis*, and *atlanis*, 170—Injury from other, non-migratory, locusts, 171—The differential and two-striped locusts, 173—Enemies and parasites, 174—Birds destroying locusts or their eggs, 174—The

1423. RILEY, C. V.—Continued.

THE ROCKY MOUNTAIN LOCUST—Continued.

silky mite, 175—The locust mite and Dr. Le Baron's description thereof, 176—The anonymous Tachina-fly, 178—The common flesh-fly, 180—Remedies, 181—Classification of protective measures, 181—Natural agencies, 181—Destruction of the eggs, 181—Destruction of the young wingless locusts, 182—Driving off the winged locusts, 184—Further suggestions, 185—Locusts as food for man, 186—The popular and scientific names of the insect, 187—Prairie fires *vs.* the Rocky Mountain locust, 189.

Appendix to the article on the Rocky Mountain locust.............. 191

Letters of three correspondents from Texas and Kansas regarding locust invasions, 191.

1424. RILEY, C. V. The ways of bag-worms. <N. Y. Semi-weekly Tribune, 14 April, 1875, 3 figs. S.-b. No. 10, pp. 11, 36.

Figure of the larva-case of an undetermined species of *Psychidæ* and of the several stages of *Thyridopteryx ephemeræformis*; habits of and means against the latter.

1425. [RILEY, C. V.] [Poisonous qualities of the Colorado potato-beetle.] <N. Y. Tribune, 14 April, 1875. S.-b. No. 10, p. 17, 34.

Mentions instances of poisoning from the fumes given out by scalded or crushed masses of *Doryphora decemlineata.*

1426. [RILEY, C. V.] Cure for canker-worm. <N. Y. Tribune, 21 April, 1875. S.-b. No. 10, p. 25.

Paris green recommended for destruction of canker-worms when other remedies are lacking. Paris green not to be used against all insects.

1427. [RILEY, C. V.] Paris green: Its effects on plants and soils, and through them on man. <N. Y. Tribune, 12 May, 1875. S.-b. No. 10, pp. 15–16; 34–35.

Paris green is not injurious to plants or the soil, nor dangerous to man when properly applied.

1428. [RILEY, C. V.] Swellings on roots of *Ampelopsis.* <Colman's Rural World, 5 June, 1875. S.-b. No. 10, p. 1.

Answer to letter of H. Hilker; swellings on roots of *Ampelopsis* possibly occasioned by root-lice, but not by *Phylloxera.*

1429. RILEY, C. V. Apple-tree plant-lice. <Colman's Rural World, 5 June, 1875.

Answer to letter of A. Moyer; occurrence of and means against *Aphis mali.*

1430. RILEY, C. V. [*Torrubia elongata*, the white-grub fungus.] <Colman's Rural World, 12 June, 1875, v—, p—.

Torrubia elongata proposed as the name for the white-grub fungus; figures of the same.

1431. RILEY, C. V. The Colorado potato-beetle, *Doryphora decemlineata.* <Garden [London], 24 July, 1875, v. 8, pp. 71–72, 5 figs. S.-b. No. 23, p. —.

Description and figures of all stages of *Doryphora decemlineata* and *D. juncta*; migrations, habits, prolificacy, enemies, and parasites of *D. decemlineata*; means against it; the use of Paris green; probability and probable method of its introduction into Europe and means of preventing such introduction; figures *Lydella* [= *Exorista*] *doryphoræ, Harpactor* [= *Milyas*] *cinctus, Arma* [= *Podisus*] *spinosus*, and *Hippodamia convergens.*

1432. Riley, C. V. Locusts *vs.* chinch-bugs. <N. Y. Tribune, 4 August, 1875. S.-b. No. 10, p. 40.

Locust ravages are likely to prevent serious injury by *Blissus leucopterus*; the latter more noticeable than usual; excessive rains in 1875, also unfavorable to the development of *Blissus leucopterus*.

1433. Riley, C. V. No locust injury in Kansas and Missouri this fall. <N. Y. Tribune, 1 September, 1875. S.-b. No. 10, p. 166.

Predicts immunity from attacks of *Caloptenus spretus* in the fall of 1875 in Kansas and Missouri.

1434. Riley, C. V. Prof. Riley and the locusts. <St. Louis Daily Globe-Democrat, 4 September, 1875, v. 1, No. 108, p. 3. S.-b. No. 10, pp. 158–159.

Reply to C. A. Davis's "Prof. Riley and the locusts;" food-plants, habits, parasites, and period of development of *Caloptenus spretus*; need of more extended investigation of this insect in its native haunts and breeding places.

1435. Riley, C. V. The grape-leaf gall. <Cultivator and Country Gentleman, 9 September, 1875, v. 40, p. 567.

Identity of the root and leaf-forms of *Phylloxera vastatrix*.

1436. Riley, C. V. White-grub fungus. <N. Y. Tribune, 6 October, 1875. S.-b. No. 10, p. 26.

Answer to inquiry of A. C. G.; brief history of *Torrubia elongata*, a parasite of *Lachnosterna fusca*.

1437. Riley, C. V. Flying locusts in Illinois. <Cultivator and Country Gentleman, 28 October, 1875, v. 40, p. 679.

Caloptenus spretus confounded with *C. femur-rubrum* by B. F. J.; *C. spretus* does not occur in Illinois.

1438. Riley, C. V. Remarks on canker-worms and description of a new genus of *Phalænidæ*. <Trans. Acad. Sci. St. Louis, 5 November, 1875, v. 3, pp. 273–280, figs. 14–21. Separate: <St. Louis, Mo., 1875, pp. 8, figs. Reprint: <8th Ann. Rept. State Ent. Mo., May, 1876, pp. 12–18, figs. 3–10. Notice: <Ca. Ent., November, 1875, v. 7, p. 219. <Proc. Bost. Soc. Nat. Hist., February, 1876, v. 18, p. 201.

Treats of *Paleacrita* [n. g.] *vernata* and *Anisopteryx pometaria*; see No. 1482 for synopsis of contents.

1439. Riley, C. V. Notes on the natural history of the grape Phylloxera, *Phylloxera vastatrix*, Planchon. <Trans. Acad. Sci. St. Louis, 5 November, 1875, v. 3, pp. 281–287, fig. 22. Extract: <Amer. Nat., June, 1881, v. 15, pp. 483–484.

Discovery of the nidus in which eggs are deposited by the winged female of *Phylloxera vastatrix*; development, habits, description, and figures of the same; description of the male and of the impregnated egg; figure of the male of *P. caryæcaulis*; summary of the natural history of *P. vastatrix*.

1440. [Riley, C. V.] Grubs and guess-work. <N. Y. Semi-weekly Tribune, 12 November, 1875. S.-b. No. 10, pp. 17–18.

Characterizes some subdivisions of the *Lamellicornia* by their habits; contrasts the larvæ, imagos, and habits of *Lachnosterna quercina* [=*fusca*] and *Lygyrus relictus*; means against the former.

1441. R[ILEY], C. V. Entomological. Apple-tree borers; timber encourages them; new bag-worm. <Colman's Rural World, 13 November, 1875. S.-b. No. 10, p. 188.

Timber-trees near apple orchards increase the likelihood of the attacks of *Saperda bivittata* [=*candida*] upon the apple-trees; habits and food-plants of *Psyche confederata*.

1442. RILEY, C. V. The army-worm; an important point yet to ascertain in its history. How it comes and goes; its natural enemies; preventive measures. <N. Y. Tribune, 16 November, 1875, 8 figs. S.-b. No. 10, pp. 29–31; 31–33.

Various applications of the name "army-worm;" seasons, habits, and natural enemies of and means against *Leucania unipuncta*; supposed method of oviposition; figures of it in its several stages, of *Exorista flavicauda*, *Microgaster* [=*Apanteles*] *militaris*, *Ophion purgatum*, and *Pezomachus minimus*, and of cocoons of the last; habits of these parasites.

1443. RILEY, C. V. The flying locusts in Illinois. <Cultivator and Country Gentleman, 25 November, 1875, v. 40, p. 744.

Extent of swarms flying south over Kansas and Nebraska on September (4th ?).

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PREFACE III
TABLE OF CONTENTS V

NOXIOUS INSECTS.

THE COLORADO POTATO-BEETLE, *Doryphora 10-lineata* 1
Damage during the year, 1—Abundant in Atlantic States, 1—Swarming on Coney Island, 2—Injuring egg-plant, 2—Its scientific name, 2—Additional enemies, 3—Eaten by the crow, 3—Remedies, 3—Cost of applying Paris green, 3—Preparing the poison, 3—Use of straw as a protection, 4—Machine for sprinkling, 4—Machine for brushing off the insects, 4—Experience with Paris green, 5—Experiments of Profs. R. C. Kedzie and Wm. McMurtrie show that it may be used with safety, 6—Trial of other remedies, 6—The insect's native home, 8—The theory that it came from the Rocky Mountain region essentially correct, 10—Poisonous qualities of the insect discussed, 10.

CANKER-WORMS, *Paleacrita vernata*; *Anisopteryx pometaria* 12
Two species long confounded, 12—They differ generically; new genus (*Paleacrita*) proposed for one, 13—The two compared in all stages, 13, 17—Characters of the genus *Paleacrita*, 17—Distinguished as spring and fall canker-worms, 17—Practical considerations from their differences of habit, 18—Stunting the larvæ does not produce male moths, 19—Traps recommended, 20, 21.

THE ARMY WORM, *Leucania unipuncta* 22
Its generic name, 22—The term "army-worm" applied to various insects, 23—Past history of the army-worm, 24—Known since 1854 in Missouri, 27—It followed the 1871 conflagration around Peshtigo, Wis., 28—Its history in 1875; very general all over the country, 28, 29—Its history in Missouri in 1875, 30—Sexual differences, 30—Sexual organs illustrated, 30, 32—Natural history of the species, 32—Illustrated in all states, 32, 33—It occurs in Europe, Asia, New Zealand, and Australia, 34—Description of the egg, 34—Where the eggs are laid, 34—Conclusions drawn from structure, 36, 37—When the eggs are laid, 40—In what state does the insect hibernate?, 43—Habits of the worm, 45—Why it escapes detection when young, 45—Why it travels in armies, 46—Time of its appearance, 46—Are there one or two broods?, 47—The fall army-worm, 48—How distinguished from the real army-worm, 48—Plants preferred by the army-worm, 49—Its sudden appearance and disappearance, 50—It swarms during wet preceded by very dry seasons, 51—Its natural enemies, illustrated, 52—Remedies, 54—Philosophy of winter burning, 54, 55—Prevention, 55—Summary of the leading facts concerning it, 56.

THE ROCKY MOUNTAIN LOCUST, *Caloptenus spretus* 57
Previous experience in spring of 1867, 57—Predictions verified, 58—General outlook in spring of 1875, 60—Extent of country ravaged, 60—The outlook in Missouri, 61—Country ravaged often as bare as in midwinter, 61—Account by counties, 62—Atchison County,

1482. **Riley, C. V.**—Continued.

The Rocky Mountain locust—Continued.

62—Andrew County, 62—Benton County, 63—Barton County, 63—Bates County, 63—Buchanan County, 64—Caldwell County, 64—Cass County, 64—Clay County, 67—Clinton County, 68—Dade County, 68—De Kalb County, 69—Gentry County, 69—Hickory County, 69—Holt County, 69—Henry County, 69—Jackson County, 69—Johnson County, 72—Lafayette County, 73—Nodaway County, 73—Newton County, 73—Pettis County, 73—Platte County, 73—Ray County, 74—St. Clair County, 75—Vernon County, 76—Condition of things in other States, 76—Kansas, 76—Nebraska, 79—Iowa, 81—Minnesota, 81—Colorado, 84—Dakota, 85—Montana, 87—Wyoming, 88—Texas, 88—Indian Territory, 88—Manitoba, 89—Damage done in Missouri, 89—Destitution in Missouri, 91—Address of relief committee from Saint Louis Merchants' Exchange, 93—Cases of starvation, 94—The Governor's proclamation, 95—The locusts not a divine visitation, 97—Natural history; mode of molting illustrated, 98—Habits of the unfledged young, 100—Directions in which the young travel, 101—Rate at which they travel, 102—They reached but a few miles east of where they hatched, 102—Not led by "kings" or "queens," 103—The species taken for such, illustrated, 103, 104—The exodus in 1875, 104—Time of leaving of the winged insects, 104—Direction taken by the winged insects, 105—Destination of the departing swarms, 106—Native home of the species, 109—Views previously expressed confirmed, 110—Conditions of migration, 112—Conditions which prevent the permanent settlement of the species in Missouri, 113—Modification of the species by climatic conditions, 114, 155—Definition of the species, 114—How distinguished in all stages from species most nearly allied, 117—Experience in spring of 1875, 118—Contrast in summer and fall, 119—No evil without some compensating good, 120—Injury to fruit and fruit trees, 121—Food-plants, 121—Only one kind of plant not touched under all circumstances, 121—Changes that followed the locusts, 121—The widespread appearance of a new grass, ordinarily unnoticed, 122—Appearance of large worms, 123—The locusts did not return in the fall, 124—Natural enemies, 124—Remedies against the unfledged insects, 125—Artificial means of destroying the eggs, 125—Various means of destroying the unfledged young, 126—They are within man's control, 126—The proper ditch to make, 128—Machines used in Colorado, 129—Best means of protecting fruit trees, 130—How to avert locust injuries, 131—Prevention, 131—Legislation, both national and local, 132—Bills before the Forty-fourth Congress, 133—Need of a national entomological commission, 133—The bounties offered in Minnesota, 138—The requisites of a good bounty law, 138, 139—How a bounty law would work, 140—Suggestions, 140—Lessons of year, 142—Locusts as food for man, 143—They have been used from time immemorial, and are used extensively at the present day, 145—The Rocky Mountain species quite palatable, 146—Mode of preparation, 147—False opinions and predictions, 148—Unnecessary alarm caused by other species, 148—Injuries of native species in 1875, 150—Locust flights in Illinois in 1875, 151—They were composed of local species, 152, 153—Explanation of these flights, 154—Locust prospects in 1876, 155—No danger from them in Missouri, 156.

1482. RILEY, C. V.—Continued.

THE GRAPE PHYLLOXERA, *Phylloxera vastatrix*........................ 157

The injuries not great in Missouri in 1875, 157—Completion of its natural history, 157—Where the winged female lays her eggs, 157, 161—The sexed individuals illustrated, 158—Description of the true female, 159—Description of the impregnated egg, 159, 162—Practical considerations growing out of these latest discoveries, 163—Decortication of the bark to destroy the impregnated egg, 163—The insect may be imported from one country to another on cuttings as well as rooted plants, 163—Best time to attack the root-lice, 163—Phylloxera ravages in California, 163—Great destruction around Sonoma, 164—Need of action by the State authorities, 164—Occurrence of Phylloxera in the Southern States, 164—Report of committee appointed by the American Pomological Society, 165—Its occurrence in Georgia, 166, 167—American grape-vines in Europe, 167—Large demand for our vines, 167—The American vines flourishing in Southern France where the European varieties perish, 167—The orders for some varieties exceeded the supply, 168—Probable future demand, 168.

INNOXIOUS INSECTS.

THE YUCCA BORER, *Megathymus yuccæ*.............................. 169

The only North American butterfly whose larva has the boring habit, 169—The arbitrary nature of classificatory divisions, 170—Butterflies and moths not easily separated, 170—Biological history of the species, 171—Illustrations of all states, 171, 172—Habits of the larva, 171, 172, 181—Mode of pupation, 172, 180—Flight of the imago, 173, 181—Position of wings when the imago rests or walks, 173—Bibliographical notes, 173—Detailed descriptions of the different states, 174, 175, 181—Structural characters illustrated, 175—Affinities of the species, 176—It is a true butterfly, belonging to the hesperians, 178—Characters of the castnians contrasted with those of hesperians, 176, 177, 178—In classification it is better to widen than restrict in the higher groups, 179—Enemies of the Yucca borer, 179—Concluding remarks, 179—Unsafe to describe species from mere drawings, 179.

NOXIOUS INSECTS—Continued.

SUPPLEMENTARY NOTES ON THE ARMY-WORM, *Leucania unipuncta* 182

Completion of its natural history, 182—Oviposition of the moth described, 183—Eggs described, 183—Conclusions previously arrived at verified, 184—Description of the different larval stages, 184.

1483. RILEY, C. V. Is the Colorado potato-beetle poisonous? <Colman's Rural World, 7 June, 1876. S.-b. No. 10, pp. 164–165.

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Answer to letter of M. F.; plants colored by certain tinctures placed at their roots; Paris green not absorbed into the tissues of plants in perceptible quantities, but neutralized in the soil.

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injurious in Western Missouri in 1876 than *Caloptenus spretus*; prospect of freedom from injury by the former for the next two years; *Vilfa vaginæflora* introduced into the eastern prairies by the locusts; limit to the eastern range of the locusts; they are not led by kings or queens; occurrence of larvæ of *Deilephila lineata* after the disappearance of the locusts; locust flights in Illinois.

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TABLE OF CONTENTS.

PREFACE 7
INTRODUCTION 9
THE COLORADO POTATO-BEETLE, *Doryphora 10-lineata* 11
  Its past history 11
    Prediction that it would reach the Atlantic, 12—Its march across the country, 13—It reaches the Atlantic, 14—Its swarming in large cities, 16—Its occurrence out at sea, 17.
  The insect's native home 17
    When it first attacked the potato, 18.
  Rate at which it traveled 21
  How it traveled 21
    Mostly in the beetle state, 21—Assisted by man, 21—Tendency to migrate in swarms, 23.
  It spreads, but does not travel in the sense of leaving one district for another 23

1558. Riley, C. V.—Continued.

The Colorado potato-beetle—Continued.

Area invaded by it 24

Causes which limit its spread 25

Intense heat in the South, 25—Excessive dryness in the mountains, 26.

How it affected the price of potatoes 26

The modification it has undergone 27

Its natural history 27

First made known in 1863, 28—The female capable of laying 1,000 eggs, 29—Three broods a year, 28.

Its poisonous qualities 29

Exhalations from the crushed bodies injurious, 29.

Its food-plants 30

The number increases with each year, 32—Varieties of potatoes preferred, 33.

The beetle eats as well as the larva 33

Its natural enemies 34

Birds which feed upon it, 35–36—Domestic fowls, 36—Reptiles, 36—Spiders and mites, 36–38—True insects, 39—Rust-red social wasp, 40—Lady-birds, 40–43—Ground-beetles, 44–45—Rove-beetles, 46—Blister-beetles, 46—Soldier-bugs, 47–51—Tachina-fly, 52—Asilus-flies, 53.

Remedies 54

Encouragement of natural enemies, 54—Preventive measures, 54—Mechanical means of destruction, 55—Pincers for, 56—Sun-scalding, 56—Horse-machine, 57—Machines for collecting, 58, 59—Poisonous applications to the plant, 60—Paris green, 61—Different modes of using Paris green, 62–65—Other poisonous applications tested, 66—Patent poisons, 68.

The use of Paris green 69

Its influence on the plant, 70—Its influence on the soil, 71—Its influence on man indirectly through the soil or through the plant, 74.

Bogus experiments 75

Alarm about the insect abroad 76

Unnecessary prohibition of traffic in American potatoes, 77—How the insect will most likely get to Europe, 78—The chances of its getting there, 79–82—Could it become acclimated there ?, 82.

Nomenclature 83

The bogus Colorado potato-beetle, *Doryphora juncta* 85

It has always existed east of the Mississippi, 85—It never attacks the cultivated potato, 85—Easily confounded with its potato-feeding congener, 86—How the two differ, 86–88.

OTHER INSECT FOES OF THE POTATO.

The stalk-borer, *Gortyna nitela* 90

Habits, 90—Remedy, 91.

The potato stalk-weevil, *Trichobaris trinotata* 92

Habits, 92—Remedy, 93.

The potato or tomato worm, *Protoparce celeus* 93

Habits, 94—Remedies, 95—Parasites, 96.

Blister-beetles 96

The striped blister-beetle, *Epicauta vittata* 97

The ash-gray blister-beetle, *Macrobasis unicolor* 98

The black-rat blister-beetle, *Macrobasis unicolor* 99

1558. Riley, C. V.—Continued.

Blister-beetles—Continued.	
The black blister-beetle, *Epicauta pennsylvanica*	99
The margined blister-beetle, *Epicauta cinerea*	99
Remedies, 100.	
The three-lined potato-beetle, *Lema trilineata*	100
Habits, 101, 102—Remedies, 102.	
The cucumber flea-beetle, *Crepidodera cucumeris*	102
Habits, 103—Remedies, 103.	
The clubbed tortoise-beetle, *Coptocycla clavata*	103
Habits, 103—Remedies, 104.	

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Replies to inquiries as to the degrees of development attained by eggs of *Caloptenus spretus* submitted for examination.

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PREFACE III
TABLE OF CONTENTS V

NOXIOUS INSECTS.

CURRANT AND GOOSEBERRY WORMS 1
There are several species, having different habits, 1—Three which may be destroyed by similar methods, 1—Botanical details as to the currant and gooseberry, 2.
THE GOOSEBERRY SPAN-WORM, *Eufitchia ribearia* 3
Its natural history, 3—Most destructive gooseberry insect in Missouri, 3—Generic nomenclature, 3—Characters of the moth, 4—Description of the egg, 4—Where the eggs are laid, 4—The in-

1570. RILEY, C. V.—Continued.

THE GOOSEBERRY SPAN-WORM—Continued.

sect single-brooded, 5—How it spreads, 5—A native species, 5—Its past history, 5—It prefers the gooseberry to the currant, 6—The moth is closely imitated by one which greatly differs structurally, 6—Parasites, 6—Remedies, 7—Other currant span-worms, 7.

THE IMPORTED CURRANT-WORM, *Nematus ribesii* 7

Belongs to the "false-caterpillars," 7—The different specific names it has received, 7—An imported species, 8—Its introduction and spread, 8—Independently imported at several eastern points, 9—Its natural history, 9—How the eggs are laid, 10—Nature and habits of the worm, 11—Characters of the parent flies, 12—Preventive measures, 13—Remedies, 13—White hellebore the best, 13—How best used, 14–15—The worm is not poisonous, 16—Natural enemies, 17—It furnishes a forcible example of arrenotoky, or the power of producing male offspring without impregnation, 18—Results of parthenogenesis in different insects, 18—It also furnishes an interesting instance of defunctionation of special parts, 19—The saw of the female imperfect compared with others, 20—Evolutionary bearings of this fact, 21—Descriptive, 21—Variation in the antennæ and wing veins, 22.

THE NATIVE CURRANT-WORM, *Pristiphora grossulariæ* 23

Wherein it differs from the imported species, 23—Its habits, 24—Where the eggs are laid, 25—How the winter is passed, 25—Its occurrence in Missouri, 26—Remedies, 26—Descriptive, 26.

THE STRAWBERRY-WORM, *Harpiphorus maculatus* 27

Also a false-caterpillar, 27—It has a wide range, 27—How the eggs are deposited, 28—Character and habits of the worm, 28—Remedies, 28—Descriptive, 28.

ABBOT'S WHITE PINE-WORM, *Lophyrus abbotii* 29

Destructive power of the insects of its genus in Germany, 29—Evergreens which it prefers, 30—Habits and characters of the worm, 30—Variation in the antennæ, 30—Characters of the perfect flies, 30–31—How the eggs are laid, 31—Natural enemies, 31—Remedies, 32—Descriptive, 32.

LE CONTE'S PINE-WORM, *Lophyrus lecontei* 32

A more general feeder than Abbot's species, 32—The close resemblance of the worms, 33—How they differ, 33—Descriptive, 33—Other species of the genus, 34.

THE COLORADO POTATO-BEETLE, *Doryphora 10-lineata* 34

Injury in the West in 1876, 34—Spread of the insect during the year, 34–35—Its great abundance on the Atlantic coast, 35—Rate at which it traveled since 1859, 37—An average of 88 miles a year, 37—How it traveled, 37; principally in the beetle state, and greatly assisted by man, 37—Its migrating habit, 38—Area invaded by it nearly 1,500,000 square miles, 38—Causes which limit its spread, 38—Will it reach the Pacific slope?, 39—How it affected the price of potatoes, 39—The modification it has undergone, 40—A mite parasite added to its natural enemies, 41—Its introduction to Europe, 42—A living specimen found last summer in the Bremen dock-yards, 42—Could it live and multiply in Europe?, 43—Action taken by European governments to prevent its introduction, 44—Consideration of the Kearney "potato-pest poison," 45.

1570. Riley, C. V.—Continued.

THE ARMY-WORM, *Leucania unipuncta* 47

Further notes and experiments thereon, 47—Two generations produced annually at St. Louis, and a probable third generation, exceptionally, 48—Summary of its natural history, 49.

THE WHEAT-HEAD ARMY-WORM, *Leucania albilinea* 50

A new enemy to wheat, 50—First complaint of it in the East, 51—First appearance in Kansas, 51—Habits and natural history, 52—The egg differs from that of the army-worm, 53—Wherein the worm is distinguished from its destructive congener, 54—Two broods each year, 54—Natural enemies, 54—Remedies, 55—Descriptive, 55.

THE ROCKY MOUNTAIN LOCUST, *Caloptenus spretus* 57

It continues to interest the people of the West, 57—Previous opinions justified, 57—The invasion of 1876, 59—Few in British America, 59—Condition of things in Montana, 59—In Wyoming, 59—in Dakota, 59—In Minnesota, 60; locusts and alkali soil, 61; good done by Governor Pillsbury, of Minnesota, 61—In Colorado, 62—In Iowa, 63—In Nebraska, 64—In Kansas, 65—In Missouri, 66—Flights in opposite directions at the same time, 66—Counties in Missouri that were overrun, 67—Red-legged locust troublesome in east Missouri, 68—Detailed reports from counties in Missouri, 68—Andrew County, 68—Atchison County, 68—Barry County, 68—Barton County, 69—Bates County, 69—Benton County, 69—Buchanan County, 69—Cass County, 69—Cedar County, 70—Caldwell County, 70—Clay County, 70—Dade County, 70—De Kalb County, 70—Gentry County, 70—Greene County, 71—Harrison County, 71—Henry County, 71—Hickory County, 71—Holt County, 71—Jasper County, 72—Jackson County, 73—Johnson County, 73—Lafayette County, 73—Lawrence County, 73—McDonald County, 74—Newton County, 74—Nodaway County, 74—Pettis County, 74—Platte County, 74—Polk County, 75—Ray County, 75—Saint Clair County, 75—Vernon County, 75—In Indian Territory, 76—In Texas, 76—In Arkansas, 76—Destination of the departing swarms of 1875, 77—They reached into British America, 78—Source of the swarms of 1876, 79—Eastern line reached, 80—Rate at which the insects spread, 80—Direction of flight, 81—Influence of wind in determining the course of locust swarms, 81—Locust flights east of the Mississippi, 81—Geographical range of species, 82—Causes which limit the spread of the Rocky Mountain locust, 83—Flights of *Acridium americanum*, 84—Does the female of the Rocky Mountain locust lay more than one egg-mass?, 85—How the eggs are laid, 86—Philosophy of the egg-mass, 87—How the young locust escapes from the egg, 88—How it escapes from the ground, 90—Additional natural enemies, 91—Animals which destroy the eggs, 91—The Anthomyia egg-parasite, 92—The common flesh-fly, 95—Other undetermined enemies of the eggs, 96—Insects which destroy the active locusts, 98—Experiments with the eggs and conclusions therefrom, 99—Experiments to test the effects of alternately freezing and thawing, 99—Experiments to test the influence of moisture upon the eggs, 104—Experiments to test the effects of burying at different depths and of pressing the soil, 104—Experiments to test the effects of exposure to the free air, 104– The Omaha conference, 106—Remedies and suggestions, 108—Des ruction of the young or unfledged locusts, 108—Protec-

1570. **Riley, C. R.**—Continued.

The Rocky Mountain locust—Continued.

tion of fruit-trees, 110—Legislation, 111—Act passed by the Missouri legislature, 111—Acts passed by the Kansas legislature, 112—Act providing for the destruction of locusts in Minnesota, 114—Area in which eggs were laid, 116—Condition of eggs, 117—Temperature of the winter of 1876–'77, 120—Prospects for 1877, 121.

INNOXIOUS INSECTS.

The Hellgrammite, *Corydalus cornutus* 125

Its curious egg-mass described, 126—Resembling bird-dung at a distance, 126—Where laid, 127—The egg-burster, 127—Characters and habits of the newly-hatched larva, 127—Difficulty of rearing it in still water, 128—The eggs that have been hitherto mistaken for those of *Corydalus*, 128—They are probably those of *Belostoma grandis*, 128.

The Yucca borer, *Megathymus yuccæ* 129

It is single-brooded, 129—Will thrive in the latitude of St. Louis, 129—The larva molts quite often, 129.

1571. **Riley, C. V.** Important observations on the Rocky Mountain locust or grasshopper pest of the West. <Sci. Amer., 28 April, 1877 [v. 50], n. s., v. 36, pp. 260–261, 5 figs.

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2. Rose-chafer; answer to letter of I. M. H.; means against *Macrodactylus subspinosus.*

3. Bark-louse; answer to letter of J. L. K.; seasons and ravages of and means against *Mytilaspis pomicorticis* [=*pomorum*].

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1587. RILEY, C. V. Fighting the Hessian-fly. <N. Y. Tribune, 18 July, 1877. S.-b. No. 14, pp. 232–233. Reprint: <Colman's Rural World, 5 December, 1877. S.-b. No. 14, pp. 268–269.

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1589. RILEY, C. V. In reference to wheat-worms. <Prairie Farmer, 11 August, 1877. S.-b. No. 14, p. 127; No. 20, p. 86.

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1590. RILEY, C. V. Locust flights. An appeal from Prof. C. V. Riley. <Manitoba Daily Free Press, 8 September, 1877. S.-b. No. 14, p. 91.

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1591. RILEY, C. V. The locusts in Kansas. <Sci. Amer., 8 September, 1877 [v. 51], n. s., v. 37, p. 164.

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1592. RILEY, C. V. A satisfactory grasshopper-machine. <Sci. Amer., 8 September, 1877 [v. 51], n. s., v. 37, p. 169.

Description and figure of a machine for the killing of locusts.

1593. [RILEY, C. V.] Mistaken identity. <N. Y. Tribune, 12 September, 1877. S.-b. No. 14, p. 233.

Answer to letter of Subscriber; *Lema trilineata* mistaken for *Doryphora* 10-*lineata*; first occurrence of the latter in Vermont in 1876.

1594. RILEY, C. V. Injured orchard. <N. Y. Tribune, 12 September, 1877. S.-b. No. 14, p. 233.

Answer to letter of G. W. T.; occurrence of numerous nests of *Formicidæ* about the roots of orchard trees; probability that the ants are harmless; means against ants.

1595. [RILEY, C. V.] The stalk-borer. <N. Y. Tribune, 12 September, 1877. S.-b. No. 14, p. 233.

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1596. RILEY, C. V. Locust prospects in southwest Missouri this fall. <Journ. and Farmer, 27 September, 1877. S.-b. No. 14, pp. 236–237.

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1597. RILEY, C. V. The Colorado potato-beetle in Europe. German thoroughness. <Sci. Amer., 29 September, 1877 [v. 51], n. s., v. 37, p. 198. S.-b. No. 14, pp. 123–124.

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1598. [RILEY, C. V.] The cussed red-leg. <Chicago [Ill.] Times, 29 September, 1877. S.-b. No. 14, pp. 119–123. Reprint: <Mo. Rept. Kansas State Board of Agric., 1877, pp. 32–41. S.-b. No. 14, pp. 146–161. Abstract: <Amer. Nat., November, 1877, v. 11, pp. 663–673. <Ca. Nat. and Quart. Jour. Sci., December, 1877, v. 8, pp. 363–374.

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TABLE OF CONTENTS.

Preface 7
Introduction 9

Chapter I:

Characters of the species 13

Classificatory position of the Rocky Mountain locust, 13—How it differs from other species, 14—Easily confounded with the common red-legged locust, 14—Detailed descriptions of both, 15—Its still closer resemblance to the Atlantic migratory locust, 22—Characters of this last, 22—Species *vs.* variety and race, 23—Comparisons of these three closely-allied species in their early stages, 26—A green variety of the Rocky Mountain locust not infrequent, 27—Purely an American insect, 28.

1625. **Riley, C. V.**—Continued.

CHAPTER II:

Chronological history 29

The locust plague in the "Old World," 29—Extent of its injuries, 30—Migratory species in Europe, Asia, and Africa, 30—The ravages of the locust in America, 31—Its earliest visitations, 31—Injuries on the Pacific coast, 32—Injuries east of the Rocky Mountains, 33—Invasions of 1818–'19, 33—Of 1845–'49, 34—Of 1855, 34—Of 1856, 35—Of 1857–'67, 35, 36—Of 1866, 36—Damage the following year, 37—The invasion of 1873, 38—That of 1874, 39—Why so disastrous, 41—General outlook in the spring of 1875, 42—Severity of the injuries from the young insects that year, 43—Destitution that prevailed, 44—Amount of loss sustained, 45—Destination of departing swarms of 1875, 47—The invasion of 1876, 49—Eastern limit reached, 53—Omaha conference, 53.

CHAPTER III:

Native home and geographical range of the species east of the mountains 55

Source of the devastating swarms that reach into the Mississippi Valley, 55—Their origin in the extreme Northwest country lying east of the mountains, 56—Cause of their emigration, 57—Difference between summer and fall swarms, 58—The species not at home in the Mississippi Valley, 62—Not permanent or able to perpetuate itself there, 62—Conditions which prevent such permanence, 63—Not likely to do serious harm east of the ninety-fourth meridian, 65—Reasons why, 65.

CHAPTER IV:

Natural history and transformations 69

How the eggs are laid, 69—Philosophy of the egg-mass, 71—The female capable of laying more than one egg-mass, 72—The escape of the young locust from the egg, 73—Its emergence from the ground, 78—Growth and transformations, 78—Acquisition of wings, 80—Number of molts, 82—Flight at night, 83.

CHAPTER V:

Habits and power for injury 85

Flight and ravages, 85—Migratory instinct and great destructive power confined to a single species west of the Mississippi, 88—Food-plants, 89—Injury to fruit trees, 93—Time of appearance of invading swarms, 94—Rate at which they spread, 95—Direction of their flight, 96—Where the eggs are preferably laid, 96—Time of hatching, 97—Habits of the young or unfledged locusts, 98—Directions in which the young travel, 100—Rate at which they travel, 100—Limit of their eastward spread, 100—Not led by kings or queens, 101—Direction taken by the departing swarms, 103—Their destination, 104.

CHAPTER VI:

Effects of the young insects in the country where they hatch, but where they are not indigenous 107

Experience with the young locusts in spring, 107—Contrast in summer and fall, 108—No evil without some compensating good, 108—Changes that follow the locusts, 109—The prevalence of large green worms, 110—The sudden appearance of a peculiar grass, 110.

1625. **Riley, C. V.**—Continued.

Chapter VII:

Natural enemies of the Rocky Mountain locust 113

Birds and other vertebrate animals, 113—The good offices of birds, 113—Invertebrate animals, 114—Animals that attack the eggs, 115—The silky mite, 115—The Anthomyia egg-parasite, 118—The common flesh-fly, 123—Undetermined larvæ, 123—Ichneumon-flies, ground-beetles, click-beetles, and myriapods, 126—Insects that destroy the active locust, 126—The locust-mite, 128—The anonymous Tachina-fly, 131—Yellow-tailed Tachina-fly, 134—Flesh-fly, 135.

Chapter VIII:

Practical considerations 139

How best to prevent locust injuries, 139—Encouragement of natural enemies, 139—Destruction of the eggs, 139—Experiments with the eggs and conclusions drawn therefrom, 140—Effects of alternately freezing and thawing, 141—Influence of moisture, 143—Exposure to the free air, 148—Burying at different depths, and pressure of the soil, 149—Table of temperatures, 152—Harrowing in the fall, 153—Collecting the eggs, 153—Plowing, how most effectual, 153—Irrigation, tramping, 154—Destruction of the young or unfledged locusts, 155—Burning, 155—Crushing, 157—Trapping, 157—Ditching and trenching, 161—Catching, 161—Different contrivances for this purpose, 162—Use of destructive agents, 162—Coal-oil pans, 163—The use of coal-tar, 164—The protection of plants by special applications, 165—The best means of protecting fruit and shade trees, 166—Sulphur fumes and smudges, 167—Destruction of the winged locusts, 167—Preventive measures, 169—Suggestions that may prove of service, 170—Use of hogs and poultry, 171—The Signal Service, 172—Military aid, 173—Diversified agriculture, 174—Organized effort, 176—State legislation, 176—Missouri locust law, 177—Kansas locust laws, 178, 179—Minnesota locust law, 180—Nebraska locust law, 184—How to avert locust invasions, 186.

Chapter IX:

Ravages of locusts east of the Mississippi 187

Migratory locusts in the eastern States, 187—The Atlantic locust, 187—Injury from other non-migratory species, 190—Often a serious matter during hot, dry seasons, 193—Locust flights in Illinois in 1875, 195—The species of which the swarms were composed, 197—Locust flights east of the Mississippi not composed of the Rocky Mountain species, 201—Necessity of discriminating between species, 201.

Chapter X:

General considerations 207

Nomenclature, 207—Locust *vs.* grasshopper, 207—Prairie fires *vs.* locust ravages, 209—Fasting and prayer, 213—Not a divine visitation, 216—Influence of the wind in determining the course of locust flights, 216—Locusts as food for man, 217.—Unnecessary alarm caused by comparatively harmless species, 227.

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TABLE OF CONTENTS.

Letter of transmittal xi

Letter of submittal xiii

Preface xv

Introduction: By C. V. Riley.

Introductory remarks 1

Creation and organization of the Commission, 1—Division of labor, 1—Circulars sent out, 2–6—Area over which eggs were laid in 1876, 6—Outlook in spring in more southern States, 7—Letter to Governor Anthony, of Kansas, on the condition of things in May, 8–10—State of things in Minnesota in spring, 11—Outlook in Nebraska in June, 13—Second meeting of the Commission, 14—Outlook in Iowa in June, 15—Visit to Colorado, Utah, and Montana in June, 17—Visit to Colorado in July, 17–20—Third meeting of the Commission, 21—Trip to the Pacific coast, 21—Trip to British America, 22—List of chapters, 23—Character and synopsis of chapters, 24–29—Prospects for 1877, 29.

Chapter I: By C. Thomas.

Classification and nomenclature; characters of the species 13

Families of the Orthoptera, 32—Locust *vs.* grasshopper, 33—Generic nomenclature, 37—Generic diagnosis, 40—Species of the genus *Caloptenus*, 42—Full definition of *Caloptenus spretus* and of its nearest congeners, 43–52.

Chapter II: By C. Thomas.

Chronological history of locust injuries 53

Compared with locust ravages in the Eastern Hemisphere, 53—Injury in the Northwest early in the present century, 54—Brief reviews from 1820 to 1877, 54–56—Locust history in Texas, 57–62; in Indian Territory, 63; in Arkansas, 64; in Missouri, 64–68; in Kansas, 68–74; in Nebraska, 74–77; in Iowa, 77–80; in Minnesota, 80–87; in Dakota, 88–92; in Montana, 92–96; in Idaho, 96; in Wyoming, 97; in Colorado, 99–102; in Utah, 102–104; in New Mexico and Arizona, 105; in Nevada, 105; in Oregon and Washington Territory, 106; in British North America, 108–112—Tabular view of locust years, 113.

Chapter III: By C. Thomas.

Statistics of losses 114

Difficulty of obtaining reliable data, 114—Estimates in Kansas, 115; in Minnesota, 116; in Missouri, 117—Loss in Kansas, Nebraska, Iowa, and Missouri in 1874, 118—Loss to different crops, 120—Loss to Missouri in 1875, 121—Total loss during the years 1874–'77, $200,000,000, 122.

Chapter IV: By C. Thomas.

Agricultural bearing of the locust problem 123

Drawback to the settling of the West, 124—What is likely to be the effect in the future, 125—Modification and settlement of the Western plains, 129—Crops which suffer most, and those which suffer least, 130—Small grains not affected by invading swarms, 128—Need of judgment in planting, 129.

1643. **Riley, C. V.**—Continued.

Chapter V: By A. S. Pachard, jr.

Permanent breeding-grounds of the Rocky Mountain locust........ 131

Permanent breeding-grounds, 131—Definition of the permanent region, 133—Its character and extent, 134—The Rocky Mountain locust a sub-boreal insect, 135—The sub-permanent region, 136—The temporary region, 136.

Chapter VI: By C. Thomas and A. S. Pachard, jr.

Geographical distribution 136

Eastern limits of spread, 137—Northern limits, 139—Western limits, 140—Southern limits, 141—Sub-permanent region, 142.

Chapter VII: By A. S. Pachard, jr., and C. Thomas.

Migrations.. 143

Classification of flights, 143—Invading swarms, 143—Returning swarms, 143—Local flights, 143—Height at which swarms move, 144—Effect of change of wind and weather on flights, 145—Flight at night, 147—Migrations previous to 1877 east of the Rocky Mountain Plateau, 148—Direction of invading swarms prior to 1877, 149—Direction of flight in 1876, 151—Migrations within the permanent region, 153–158; in Montana, 153; in Wyoming, 156; in Colorado, 157; in Eastern Idaho and Utah, 158; in the lower Snake Valley, 158—Return migrations from the temporary region previous to 1877, 159–162—Return migrations in 1877, 162–165—Local flights in 1877, 165—Record of flights for July 3 and July 20, 1877, 165–169—Summary of flights by States, 170–174—Southward flights in 1877, 175—Movements in different directions at one time, 176—Destination of return swarms, 177.

Chapter VIII: By C. V. Riley.

Habits and natural history.. 212

Destructive powers of locusts, 212–215—Stoppage of railroad trains, 215—Rate at which locust swarms move, 215—Velocity of flight, 216—Direction of invading swarms, 217—Time of appearance of invading swarms, 217—Flight at night, 218—Height of flight, 219—General habits at night, 219—Where the eggs are laid, 222—Manner in which the eggs are laid, 223—Philosophy of the egg-mass, 225—The female lays more than one egg-mass, 226—Interval between different egg-layings, 227—Number of eggs laid, 228—The hatching process, 228–231—Where and under what conditions of soil the young hatch most freely, 231—Time of hatching, 231—Habits of the young or unfledged locusts in the temporary region, 232—Directions in which the young travel, 234—Rate at which the young travel, 235—They reach but a few miles east of where they hatch, 235—Not led by kings and queens, 236—Time of year when wings are acquired, 237—Direction taken by swarms departing from the temporary region, 238—Destination of departing swarms, 238—Do the return swarms breed? 239—Do return swarms from the temporary region retrace their course? 240—The species essentially single-brooded, 240–243—Reasons why it cannot produce two generations annually, 243—The species can not permanently dwell in the temporary region, 244—The insects which hatch there do not remain, 246—Extensive and thick egg-laying seldom occurs twice consecutively in the same locality, 247—Reasons why it does not, 248—Causes of migration, 249—Food-plants, 251—Crops and plants most liked and those feast liked, 252–254—Unnecessary alarm caused by comparatively harmless species, 255.

1643. **Riley, C. V.—Continued.**

CHAPTER IX: By A. S. Pachard, jr.

Anatomy and embryology 257

External anatomy, 257—Divisions of the body, 258—Sexual differences, 259—Internal anatomy, 261—The digestive system, 262-264.—The nervous system, 264—The heart, 266—The tracheæ and dilated air-sacs, 267—Mode of breathing, 269—The locust an aëronaut, 270—The male reproductive system, 270—The female reproductive system, 271—Organs of special sense, 272—The fine anatomy of the locust, 273—Embryology of the Rocky Mountain locust, 277—Different egg-layers, 278—How the embryo lies within the egg, 278—How it bursts the egg, 279.

CHAPTER X: By C. V. Riley.

Metamorphoses 279

The six stages of growth, 279—Variability in the depth of coloring, 281—The process of molting, 281—Time required for it, 283—Differences in the immature stages between the Rocky Mountain, the lesser, and the red-legged locusts, 283.

CHAPTER XI: By C. V. Riley.

Invertebrate enemies 284

Value of the locust's minute enemies, 284—Animals that destroy the eggs, 285—The *Anthomyia* egg-parasite, 285—The common flesh-fly, 289—Ground-beetles and their larvæ, 289—*Harpalus* larvæ, 289—The egg-feeding *Amara*, 291—Blister-beetle larvæ, 292—Their character and locust egg-feeding habits, 293—History of the oil-beetle, 294—History of *Sitaris*, 295—History of *Hornia*, 296—History of *Epicauta*, 297—*Macrobasis* and *Henous*, 301—Other meloid genera, 302—Soldier-beetle larvæ, 302—Asilid larvæ, 303—Click-beetle larvæ, 304—Miscellaneous species, 305—Chalcid-fly, 306—Animals that prey on the locust after it is born, 306—The locust-mite, 306—The efficacy of its work, 308—Its transformations, 309—Other mites, 312, 313—Ground-beetles, 313—Tiger-beetles, 314—Asilus-flies, 317—Digger-wasps, 317—Tachina-flies, 319—Their efficacy in destroying locusts, 321—Flesh-flies, 323—Ichneumon-flies, 324—Hair-worms, 326—Their curious life-history, 327-332—Insects attacked by hair-worms, 327—How hair-worms get into locusts, 332—Miscellaneous locust enemies, 334.

CHAPTER XII: By C. Thomas.

Vertebrate enemies 334

Good offices of birds probably underrated, 334—Experience of correspondents, 336—Some of the most useful birds, 338—Paper by Professor Aughey on the beneficial work of birds, 338—Enormous number of birds destroyed for market, 346—Damage done to insectivorous birds by birds of prey, 348—The English sparrow, 349—What public sentiment needs, 349.

CHAPTER XIII: By C. V. Riley.

Remedies and devices for destruction 350

Encouragement of natural agencies, 351—Destruction of the eggs, 351—Harrowing in the autumn, 353—Experiments to test the effect of alternately freezing and thawing, 353—Experiments to test the effects of exposure to air, 354—Experience with harrowing, 355—Plowing, 356—Experiments to test the effects of burying at different depths, 356—Experience in plowing, 358—Irrigation, 359—Experiments to test the effects of moisture on the

1643. RILEY, C. V.—Continued.

CHAPTER XIII—Continued.

eggs, 359—Tramping, 361—Collecting, 361—Destruction of the young or unfledged locusts, 362—Burning, 363—The burning of prairies, 363—The Hetzel burning machine, 363—The Horner burning contrivance, 363—Hand burners, 364—The Atwood machine, 364—Use of wire and kerosene, 364—Crushing, 364—The Drum locust-crusher, 365—The Simpson locust-crusher, 366—The Hoos locust-crusher, 367—The Hansberry locust-crusher, 368—The Kenworthy locust machine, 370—J. C. Melcher's machine, 371—The Peteler machine, 371—The King suction-machine, 374—The Flory locust-machine, 376—Trapping locusts, 377—Nets and seines, 377—Ditching and trenching, 378—Protection by barriers, 381—Coal-oil, 381—Coal-oil pans, 383—The Canfield pan, 384—The Adams pan, 385—The Anderson coal-oil contrivance, 386—Mr. Long's contrivance, 386—Mr. Watrous's contrivance, 387—Mr. Swearingen's contrivance, 387—Use of coal-tar, 387—The Robbins pan, 388, 390—Use of coal-tar previous to 1877, 388—Other machines for the use of coal-tar, 391—Catching and bagging, 391—Principles and facts to be borne in mind in catching locusts, 391—The Riley machine, 392—Mr. Thompson's net, 392—The Elliot catcher, 394—The Wilson-Rhode catcher, 395—Contrivance for catching the pupæ, 394—The Godard catcher, 395—The Benson catcher, 396—The Hutchins catcher, 396—The Sylvester catcher, 397—The Hero 'hopper-catcher, 398—The Belt device, 398—Hand-nets, 399—Use of destructive agents, 399—Buhach or Persian insect-powder, 400—Veith's insect-fluid, 400—Sulpho-carbonate of potassium, 401—Naphthaline, 401—Paris green, 401—The protection of fruit trees, 403—Destruction of the winged insects, 404—Fumigation, 405—The effect of concussion, 405—Diversified agriculture, 406—Legislation, 407—Bounty laws, 409—Missouri locust act, 409—Kansas locust acts, 410—Minnesota locust acts, 412—Nebraska locust act, 413—Suggestions that may be of service, 414—More attention needed to the growth of root-crops, 415—The benefits of irrigation, 415—Hogs and poultry, 415—Non-planting, 415—Use of soldiers, 416—Preventive measures against the winged insects, 417—Further investigation needed, 417—Means that have been suggested against the winged insects, 418—Systematic burning of young, 418—Co-operation with Dominion Government, 419—Protection by smoke, 419—Farmers should receive the locust probabilities, 420.

CHAPTER XIV: By C. V. Riley.

Influence of prairie fires on locust increase 421

Reasons given why prairie fires do not influence locust increase, 421—Possible indirect connection in the past, 422.

CHAPTER XV: By C. V. Riley.

Influence of weather on the species 423

Meteorological conditions affecting the life of the locust, 423—Effects of weather on the young locusts, 424—Effects of weather on the eggs, 424—Possibility of predicting consequences upon meteorological grounds, 424—The temperature of the soil, 425—Thermal constant for the hatching of locust eggs, 426—Number of hours which eggs must be exposed to hatch at a temperature of 60° F., 431—Number of hours required in 1875.

1643. RILEY, C. V.—Continued.

CHAPTER XVI: By C. V. Riley.

Effects that generally follow severe locust injury.................... 432

Contrast between summer and autumn, 432—No evil without some compensating good, 433—Changes that follow the locusts, 433—Sudden appearance of plants and insects not ordinarily noticed, 434—The white-lined morning Sphinx, 435—Tame grasses permanently injured, wild grasses not, 435—Permanent effects on different plants, 436—Injury to fruit trees, 436.

CHAPTER XVII: By A. S. Pachard, jr.

Uses to which locusts may be put.................................. 437

Locusts as food for man, 438–441—As fish-bait, 441—Analysis of locust-juices, 442—They furnish a large quantity of formic acid and a new oil, 442–443—Locusts as manure and as poultry food, 443.

CHAPTER XVIII: By C. V. Riley.

Ravages of other locusts in the United States 443

Ravages of locusts that are occasionally migratory in the Atlantic States, 443—Great destruction in past years in New England, 444—The most common species concerned in this work, 446—Locust flights in Illinois, 446—The species composing them, 447—The phenomenon exceptional, 447—Locusts ordinarily non-migratory, occasionally become so under favoring conditions, 448—Locust flights in Ohio, 449—Importance of discriminating between species, 450—Geographical limits of species, 450—The migratory locusts of the Pacific, 451—Chronological account of their ravages, 451—Species concerned, 452—Late injuries in southern California, 454—Tabular view of locust years, 456—Injury from other non-migratory locusts, 456—The species concerned, 459.

CHAPTER XIX: By A. S. Pachard, jr.

Ravages of locusts in other countries.................................. 460

Locust injuries in Central America, 460—Great destruction in Honduras and Guatemala, 462—The locusts in South America, 465—The locusts in the Old World, 467—Injuries in Germany, 468—Habits of the European species, 469—Injuries in Russia, 470—Different species affecting the Old World, 471—Geographical distribution of the European migratory locust, 472–476—Notes on Algerian locusts, 476—Injury in China, 477—In southern Australia, 477.

APPENDICES.

APPENDIX I:

Mr. Allen Whitman's report from Minnesota .... [3]

State of things in spring, [4]—Exertions of farmers, [4]—Different means employed to destroy the eggs, [4]—Effects of temperature and rain-fall on the eggs, [5]—Dates of hatching, [6]—Late hatching, [7]—Progress during spring, [8]—First winged, [10]—Statistics of damage, [11].

APPENDIX II:

Aughey on locust-feeding birds.. [13]

Letter of transmittal, [13]—Examinations of the contents of the stomachs of birds of Nebraska, giving the number of locusts, number of other insects, and number of seeds of the different birds considered in their proper classificatory position, [14]–[62].

1643. **Riley, C. V.**—Continued.

APPENDIX III:

Texas data for 1877 .... [63]

Report of Jacob Boll, special assistant, [62]—Reports from correspondents and other miscellaneous reports, chronologically arranged, [64]-[82].

APPENDIX IV:

Missouri data for 1877 .... [83]

Reports from correspondents, and other data, chronologically arranged, [83].

APPENDIX V:

Kansas data for 1877 .... [85]

Report by George F. Ganmer, special assistant, [85]—Report by A. N. Godfrey, special assistant, [88]—Reports from correspondents and miscellaneous matter, chronologically arranged, [90]-[103].

APPENDIX VI:

Iowa data for 1877 .... [104]

Detailed data from correspondents, and from other sources, chronologically arranged, [104]-[110].

APPENDIX VII:

Colorado data for 1877 .... [111]

Report from William Holly, special assistant, [111]—Data from correspondents and from other sources, [113]-[116].

APPENDIX VIII:

Nebraska data for 1877 .... [116]

Journal kept by Prof. Samuel Aughey, special assistant, [117]-[128]—Miscellaneous data from correspondents, chronologically arranged, [128]-[132]—Record kept by Hon. J. Sterling Morton, [132].

APPENDIX IX:

Narrative of the first journey made in the summer of 1877, by Mr. Packard .... [134]

Diary notes through Kansas, Colorado, and Utah, [135]—Observations in Montana, [137]—Results of the journey, [138].

APPENDIX X:

Narrative of a second journey in the summer of 1877, by Mr. Packard. [139]

From Chicago to Utah, [139]—Observations in Oregon and Washington Territory, [140]—From Vancouver Island to California, [141]—Variations in *Caloptenus spretus, atlanis,* and *femur-rubrum,* [143].

APPENDIX XI:

British-American data .... [145]

Characteristics and prevailing winds of Manitoba, [145]—Data from the Cypress Hills region, [146]—The locust breeds permanently in the third prairie steppe, [146]—No damage ever done in the Peace River country, [146]—Ravages in the Northwest in the early part of the century, [147]—Records by the Hon. Donald Gunn, [148].

APPENDIX XII:

Autumn flights in 1877 .... [150]

Southward movements in Minnesota and Iowa, [150]—In Nebraska and Missouri, [151]—In Arkansas and Kansas, [152]—In Colorado and Texas, [155].

1643. **Riley, C. V.**—Continued.

Appendix XIII:

Flights and migrations in 1877 .... [156]

Locust movements in the more southern portion of the temporary region, [156]-[164]—Flights in the more northern parts of the locust country, [164]-[197].

Appendix XIV:

Answers to the question: Did any locusts remain in the temporary region after the departure of the return swarms? .... [198]

Answers from Arkansas, Colorado, and Iowa, [198]—Answers from Kansas, [199]—Answers from Missouri, [200]—Answers from Minnesota, Nebraska, and Texas, [201].

Appendix XV:

Prevailing direction in which the young insects travel .... [202]

Movements of young in Iowa and Nebraska, [202]—Movements in Dakota, Minnesota, and elsewhere, [203].

Appendix XVI:

Time of year when the bulk of the insects become winged .... [205]

Data from various States and Territories, [205]-[206].

Appendix XVII:

Habits of the insects at night .... [207]

Nocturnal habits of locusts in Iowa, Dakota, and Nebraska, [207]—In Minnesota and elsewhere, [208]-[210].

Appendix XVIII:

Facts relating to the eggs .... [211]

Data as to time of hatching of eggs, proportion destroyed, causes of destruction, etc., in Colorado and Dakota, [211]—In Iowa and Kansas, [212]—In Minnesota, [213]—In Missouri and Nebraska, [216]—In Texas and Utah, [217].

Appendix XIX:

Means of destruction .... [218]

Means employed in Dakota and Nebraska, [218]—In Iowa, [219]—In Minnesota, [220]—Elsewhere, [221].

Appendix XX:

Injury: crops affected .... [222]

Injury in the different States and Territories, [222]-[225].

Appendix XXI:

Previous visitations—Aid of animals .... [226]

Data from Nebraska and Iowa, [226]—From Minnesota, [227]—From Dakota, [229].

Appendix XXII:

Minnesota data .... [230]

Early injury in Minnesota, [230]—Data for 1877, [231]-[235].

Appendix XXIII:

Are the eggs ever laid thickly for two consecutive years in the same ground? .... [236]

Answers to the above question from Arkansas, Colorado, and Iowa, [236]—From Kansas, [237]—From Missouri, [238]—From Minnesota, Nebraska, and Texas, [239].

Appendix XXIV:

Miscellaneous data .... [240]

From Minnesota and Nebraska, [240]—From Iowa, [241]—From Dakota, [242].

1643. Riley, C. V.—Continued.

Appendix XXV:

Data from Dakota, Montana, Utah, and New Mexico .... [243]

From Dakota, [243]-[247]—From Montana, 248—From Utah, [253]—From New Mexico, [259].

Appendix XXVI:

List of correspondents .... [261]

In Arkansas, British America, and California, [261]—In Colorado and Dakota, [262]—In Idaho and Iowa, [263]—In Kansas, [264]—In Minnesota, [265]—In Missouri, [267]—In Montana, [269]—In Nebraska, Nevada, and New Mexico, [270]—In Texas, Utah, and Washington Territory, [271]—In Wyoming, [272].

Appendix XXVII:

Bibliography on the locusts of America. By B. P. Mann .... [273]

Index .... [281]

Errata .... [295]

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Early history, synonymy, distribution, seasons, enemies, and parasites of *Leucania unipuncta*; habits of larvæ and of female imagos; descriptions of all stages; figures of all stages except the egg; figures of two unnamed parasitic Ichneumons. Parasitic habits of *Exorista* [= *Nemoræa*] *leucaniæ*, *E. flavicauda*, *Microgaster* [= *Apanteles*] *militaris*, *Pezomachus minimus*, and *Ophion purgatus*; descriptions of *Microgaster* [= *A.*] *militaris*, *Mesochorus vitreus*, and *Ophion purgatum*. *Ichneumon leucaniæ* also a parasite.

1671. RILEY, C. V. Phylloxera. <Johnson's New Universal Cyclopædia, 1878, v. 3, pp. 1241–1243, 8 figs. S.-b. No. 10, pp. 192–194.

Definition of the genus *Phylloxera*; list of the sixteen (16) described United States species; descriptions of their galls; distribution, history, description, and figures of various stages and ravages of and means against *Phylloxera vastatrix*.

1672. RILEY, C. V. Potato-bug. <Johnson's New Universal Cyclopædia, 1878, v. 3, pp. 1361–1364, 9 figs. S.-b. No. 10, pp. 195–198.

List of principal enemies of potato-plant; spread, natural history, food-plants, enemies of, and means against *Doryphora decemlineata*; figures of the same in its different stages, and of *Lydella* [= *Exorista*] *doryphoræ*, *Calosoma calidum*, *Hippodamia convergens*, *Mysia* [= *Anatis*] *15-punctata*, *Arma* [= *Podisus*] *spinosus*, *Harpactor* [= *Milyas*] *cinctus*, *Perillus circumcinctus*, and *Doryphora juncta*.

1673. RILEY, C. V. Weevil. <Johnson's New Universal Cyclopædia, 1878, v. 4, p. 1338, fig. S.-b. No. 14, p. 46.

Definition of "weevil;" mention of numerous species, with statement of their food-plants and manner of obtaining food; habits and means against *Sitophilus* [= *Calandra*] *granaria* and *S.* [= *C.*] *oryzæ*.

1674. **Riley, C. V.** The locust swarms that devastate the trans-Mississippi country; their source, movements, and eastern limit. <Western Farmer's Almanac for 1879, 1878, pp. 48–50. S.-b. No. 19, pp. 247–248.

Limits of the breeding-grounds of and of regions invaded by *Caloptenus spretus*; causes, periods, and directions of their flights; causes of the limitations of the same physical and principally atmospheric; amount of ravages.

1675. [**Riley, C. V.**] Prof. Riley in favor of the birds. <Evening Star [Washington, D. C.], 9 January, 1879, v. 53, No. 8039, p. 3. S.-b. No. 19, pp. 223–224; No. 23, p. 94.

From St. Louis [Mo.] Globe-Democrat. List of some birds which are beneficial to horticulture and some which are noxious.

1676. **Riley, C. V.** Letter from Prof. C. V. Riley. <Colman's Rural World, 15 January, 1879. S.-b. No. 23, pp. 107–108.

Letter to N. J. Colman transmitting report as former treasurer of the Missouri State Horticultural Society; transmission of documents for distribution; proposal for a revised and condensed edition of author's reports as State entomologist of Missouri.

1677. [**Riley, C. V.**] Michigan apples and codling-moth. <N. Y. Tribune, 15 January, 1879. S.-b. No. 23, p. 109.

Freedom of apples from *Carpocapsa pomonella* in 1878 in Michigan due to the smallness of the apple crop in 1877 and to the efforts made by the orchardists to exterminate the insects.

1678. **Riley, C. V.** Notes on the *Aphididæ* of the United States, with descriptions of species occurring west of the Mississippi. <Bull. U. S. Geol. and Geog. Surv. Terr., 28 February, 1879, v. 5, pp. 1–32, pl. 1–2, with 2 pp. expl. of pl. Separate: <Washington, 22 January, 1879, 32 pp., 2 pl., with 2 pp. expl. of pl. Abstract: <Sci. News, 15 April, 1879, v. 1, pp. 184–186.

Part 1, pp. 1–17, by C. V. Riley, entitled "Biological notes on the *Pemphiginæ*, with descriptions of new species;" history and description of *Schizoneura americana* n. sp. [p. 4], *Colopha ulmicola*, *Pemphigus populi-monilis* n. sp. [p. 13], *P. populi-transversus* n. sp. [p. 15], *P. p.-ramulorum* n. sp. [p. 16], *P. acerifolii* n. sp. [p. 16], *P. fraxinifolii* n. sp. [p. 17], and *Hormaphis spinosus*.

Part 2, pp. 18–32, by J. Monell, entitled "Notes on *Aphidinæ*, with descriptions of new species." Describes nine (9) new species of *Siphonophora*, five (5) of *Aphis*, two (2) of *Rhopalosiphum*, nine (9) of *Callipterus*, three (3) of *Chaitophorus*; description of other species of these genera and of *Drepanosiphum* and the genera above named; synoptic tables of some of the species.

1679. [**Riley, C. V.**] [Plant-lice on potatoes.] <N. Y. Tribune, 12 February, 1879. S.-b. No. 23, p. 109.

Aphididæ reputed injurious to potato plants, probably *Aphis solani*.

1680. **Riley, C. V.** Missouri entomological reports. <Colman's Rural World, 19 February, 1879. S.-b. No. 23, p. 102.

Proposal for republication of the reports of the State entomologist of Missouri; reasons for the non-publication of a tenth report; sketch of what that report would have contained.

1681. RILEY, C. V. Entomological notes. The chinch-bug. <Farmer's Review. February, 1879, 2 figs. S.-b. No. 23, pp. 111–112.

Figures of all stages, ravages, natural history, and means against *Blissus leucopterus*; its method of hibernation, and the effect of weather upon it.

1682. RILEY, C. V. Notes on the apple-worm. <Colman's Rural World, 5 March, 1879. S.-b. No. 23, p. 102. Reprint with slight changes: <Amer. Nat., August [July], 1879, v. 13, pp. 523–524. <Ann. Rept. [U. S.] Commissioner Agric. for 1878, 22 November, 1879, pp. 238–239.

See No. 1721 for synopsis of contents.

1683. RILEY, C. V. The rice-weevil. Serious injury to stored and to cribbed corn. <Farmer's Review, March, 1879, fig. S.-b. No. 23, p. 99; 112.

Figures larva, pupa, and imago of *Calandra oryzæ* and imago of *C. granaria*; habits, ravages, and means against the same; description of egg and method of oviposition of *C. oryzæ*; use of carbon bisulphide against these insects; poisonous effects of eating the comminuted beetles.

1684. RILEY, C. V. [Letter to W. G. Le Duc.] <Boston Daily Herald, 4 April, 1879. <Psyche Advertiser, 11 April, 1879, v. 2, p. 9. <Ent. Nach., 1 July, 1879, jahrg. 5, p. 177.

The reason for which the author resigned as entomologist of the U. S. Department of Agriculture was not ill-health.

1685. RILEY, C. V. Preventing rot in plums. <N. Y. Tribune, 9 April, 1879. S.-b. No. 23, p. 110; 129.

Trapping and jarring recommended as a means against *Conotrachelus nenuphar*.

1686. [RILEY, C. V.] A new insect pest. <Colorado Farmer, 10 April, 1879, v. 12, No. 15, p. 6. S.-b. No. 23, p. 108.

Injury to orchards and ornamental trees in California by *Dorthesia* [*characias*?], introduced from Australia; ravages of *D. characias* in southern Africa; prospective ravages in California; means against it.

1687. RILEY, C. V. The nervous system and salivary glands of Phylloxera. <Psyche, 11 April, 1879, v. 2, pp. 225–226.

Correctness of E. L. Mark's conclusion that the author had mistaken nerve cords for tracheæ; dissent from M. Cornu's view that the root swellings caused by *Phylloxera* are due to mechanical action of the puncture and the subsequent absorption of liquids; swelling considered to be caused by the introduction of a salivary secretion.

1688. RILEY, C. V. Mr. Henderson's experiments. <Gardener's Mo. and Hortic., April, 1879, v. 21, pp. 120–121. S.-b. No. 23, p. 107.

Review of P. Henderson's "Carnivorous plants;" believes that *Dionæa* and *Drosera* are nourished by the insects digested by their leaves.

1689. RILEY, C. V. The migrations and hibernation of *Aletia argillacea*. <Washington [D. C.] World, 10 May, 1879. <Science News, 1 June, 1879, v. 1, pp. 230–232. S.-b. No. 23, pp. 119–120. <Sci. Amer., 14 June, 1879 [v. 54], n. s., v. 40, p. 375. <Galveston [Tex.] Daily News, 24 October, 1879, v. 38, p. 2.

1689. RILEY, C. V.—Continued.
S.-b. No. 23, pp. 166–167, No. 42, pp. 38–39. Abstract: <Amer. Nat., November [25 October], 1879, v. 13, p. 726. <Farmer's Review, September, 1879. S.-b. No. 23, p. 108.

Ravages of insects, particularly of *Aletia argillacea* [= *xylina*] in the United States; hibernation theories; author's belief in the probable hibernation of the moth in the southern parts of the cotton belt; species mistaken for *Aletia*; description and food-plants of *Aspila virescens*.

1690. RILEY, C. V. Insects affecting clover. <N. Y. Tribune, 14 May, 1879. S.-b. No. 23, p. 90; 97; 129.

Habits, ravages of and means against *Hylesinus trifolii* and *Cecidomyia leguminicola*; prior observations upon the same; characters distinguishing *C. leguminicola* from *C.* [= *Diplosis*] *tritici* and *C. destructor*.

1691. RILEY, C. V. [*Œcanthus niveus*.] <N. Y. Tribune, 14 May, 1879. S.-b. No. 23, p. 95; 98.

Occurrence of eggs of *Œcanthus niveus* in twigs of apple, raspberry, grape, and other plants; slight injuries to be expected from the same; means against them.

1692. [RILEY, C. V.] Insect powders and their use. <N. Y. Tribune, 14 May, 1879. S.-b. No. 23, p. 95; 96; 130–131.

Abstract of W. Saunders' "Insect powder," with additions; differences between Persian and Dalmatian insect powder; methods of using them against insects.

1693. [RILEY, C. V.] The grasshopper prospect. <N. Y. Tribune, 14 May, 1879. S.-b. No. 23, p. 98.

Prospect of injuries by *Caloptenus spretus* in 1879; a new species injurious in the Sierra Valley of California.

1694. RILEY, C. V. The westward progress of the imported cabbage-worm. <Amer. Nat., June [20 May], 1879, v. 13, p. 393. See: <Colorado Farmer, 10 April, 1879. S.-b. No. 23, p. 108. <Farmer's Review, April, 1879. S.-b. No. 22, p. 64. <Colman's Rural World, 1879. S.-b. No. 23, p. 108. <Ann. Rept. [U. S.] Commissioner Agric. for 1878, 22 November, 1879, p. 239.

Spread of *Pieris rapæ* into Illinois and Missouri; means against the same.

1695. [RILEY, C. V.] Lures for moths. <N. Y. Tribune, 28 May, 1879. S.-b. No. 23, p. 95.

Trapping *Carpocapsa pomonella* in shallow dishes of sweetened liquid more harmful than beneficial, as many useful insects are destroyed; the method serviceable against *Heliothis armigera*.

1696. [RILEY, C. V.] The currant-worm. <N. Y. Tribune, 11 June, 1879. S.-b. No. 23, p. 106.

Description, habits, distribution, and spread of and means against *Nematus ventricosus* [= *ribesii*]; methods of using hellebore.

1697. [RILEY, C. V.] Sweet-potato beetle. <N. Y. Tribune, 11 June, 1879. S.-b. No. 23, pp. 106—107; 131.

Description of all stages, habits, food plants, and means against *Coptocycla* [= *Cassida*] *nigripes*.

1698. RILEY, C. V. [The seventeen year Cicada.] <N. Y. Tribune, 1879. Reprint: <Colman's Rural World, 25 June, 1879. S.-b. No. 23, p. 152.

Boundaries of the areas in which *Cicada* [= *Tibicen*] *septendecim* is expected to occur in 1879; request for information of its appearance.

1699. RILEY, C. V. The imported carpet-beetle, *Anthrenus scrophulariæ*, L. <Farmer's Review, 1879, fig. S.-b. No. 23, pp. 96–98. Extract: <Amer. Ent., March, 1880 [v. 3], n. s., v. 1, p. 54.

Letter of J. H. Parsons, with answer; description of larva and imago of *Anthrenus scrophulariæ*; its history, habits, ravages, and means against them; figures larva, pupa, and imago.

1700. [RILEY, C. V.] The cheese-skipper. <N. Y. Tribune, 2 July, 1879. S.-b. No. 23, p. 93. Notice: <Farmer's Review, 7 September, 1879. S.-b. No. 23, p. 103.

Description of larva, pupa, and imago, habits and means against *Piophila casei*.

1701. RILEY, C. V. The thick-thighed walking-stick. <Sci. Amer., 5 July, 1879 [v. 55], n. s., v. 41, pp. 7–8, fig. S.-b. No. 23, p. 121. Reprint, with slight changes: <Ann. Rept. [U. S.] Commissioner Agric. for 1878, 22 November, 1879, pp. 241–245, pl. 3.

Treats of *Diapheromera femorata*. See No. 1721 for synopsis of contents.

1702. RILEY, C. V. The cotton-worm. <Mobile Register, 9 July, 1879. S.-b. No. 68, p. 204. See: <Colorado Citizen, 17 July, 1879. S.-b. No. 23, p. 91. <Galveston News, 19 July, 1879. S.-b. No. 23, p. 93.

Remarks at the Cotton Exchange about prospective injuries from *Aletia argillacea* [=*xylina*]; sudden appearance and means against the same; more injurious in wet than dry weather.

1703. RILEY, C. V. Other insects affecting cheese. <N. Y. Tribune, 9 July, 1879. S.-b. No. 23, p. 92. Reprint: <Amer. Dairyman. <Western Rural, 9 August, 1879, v. 17, No. 32, p. 250. S.-b. No. 23, p. 92.

Habits and transformations of *Tyroglyphus siro, Corynetes* [=*Necrobia*] *rufipes*, and *Dermestes lardarius*; tenacity of life of the *Tyroglyphus* and assumption of *Hypopus* form by the same; anecdote of Latreille; injury done in cheese by *Musca corvina*.

1704. RILEY, C. V. Pupation of the *Nymphalidæ*. Abstract: <Psyche, 11 July, 1879, v. 2, pp. 249–251.

Notice of prevalent explanations of the manner in which suspended pupa of Lepidoptera support themselves while shedding the larval skin; explanation of the process in *Vanessa antiopa* and *Paphia glycerium*.

1705. RILEY, C. V. Fire-flies. <Sci. Amer., 26 July, 1879 [v. 55], n. s., v. 41, p. 49. S.-b. No. 23, p. 104.

Definition of "Fire-flies;" description of larva, pupa, and imago of *Photinus pyralis*; *Photuris pennsylvanicus*, the commonest species in the more northern states; absence or imperfect development of wings in certain female *Lampyridæ*.

1706. **Riley, C. V.** Grape-scale insect, new species. <Pacific Rural Press, 16 August, 1879. S.-b. No. 32, p. 66.

Answer to inquiry of editor of Press; a new coccid, allied to *Pulvinaria vitis.*

1707. **Riley, C. V.** Dragon-flies. <Sci. Amer., 23 August, 1879 [v. 55], n. s., v. 41, p. 113. S.-b. No. 23, p. 100.

Description and natural history of *Libellulidæ.*

1708. **Riley, C. V.** Failure of tea roses. Habits of Fuller's rose beetle, *Aramigus fulleri* Horn. <Sci. Amer., 30 August, 1879 [v. 55], n. s., v. 41, p. 129, fig. S.-b. No. 23, pp. 114–116. Reprint: <Gardener's Mo. and Hortic., October, 1879, v. 21, pp. 310–311, fig. S.-b. No. 23, pp. 126–127. Reprint, with additions: <Ann. Rept. [U. S.] Commissioner Agric. for 1878, 22 November, 1879, pp. 255–257, pl. 17, f. 2.

See No. 1721 for synopsis of contents.

1709. **Riley, C. V.** The "Devil's darning needle." <Sci. Amer., 6 September, 1879 [v. 55], n. s., v. 41, p. 148. S.-b. No. 23, p. 104. Review: <Sci. Amer., 27 September, 1879 [v. 55], n. s., v. 41, p. 194. S.-b. No. 23, p. 103½.

Diapheromera femorata winters in the egg-state; W. J. McGee confounds the above with a species of *Ranatra*; the term "Devil's darning needle" mostly associated in the popular mind with the dragon-flies (*Libellulidæ*).

1710. **[Riley, C. V.]** The red-spider on roses. <Sci. Amer., 13 September, 1879 [v. 55], n. s., v. 41, p. 161. S.-b. No. 23, pp. 116–117.

Nature, ravages, and means against *Tetranychus telarius*; habits and transformations of *Acarina.*

1711. **Riley, C. V.** Philosophy of the pupation of butterflies. <Sci. Amer. Suppl. No. 193, 13 September, 1879, p. 3069, 3 figs. S.-b. No. 23, p. 125. Reprint: <Science News, 15 September, 1879, v. 1, pp. 346–350. Reprint with changes: <Nature, 16 October, 1879, v. 20, pp. 594–595. <Kosmos, January, 1880, bd. 6, pp. 313–318. <Proc. Amer. Assoc. Adv. Sci. for 1879, 1880, v. 28, pp. 455–463, figs. <Separate: Salem, Mass., July, 1880, 9 pp., 6 figs. <Amer. Ent., July, 1880 [v. 3], n. s., v. 1, pp. 162–167, figs. 65–70. Abstract: <The Field Nat. and Sci. Student, January, 1883, pp. 179–180. S.-b. No. 42, p. 1. <Bull. Philos. Soc. Wash., 1879, v. 3, pp. 41–43.

Illustrates the prevalent explanation of the manner in which suspended chrysalids become attached to their supports; describes and illustrates the more correct process; structure of the terminal joint of the chrysalis especially in *Vanessa antiopa*, *Terias* sp., *Danais archippus*, and *Paphia glycerium.*

1712. **Riley, C. V.** Parasites of the cotton-worm. <Ca. Ent., September, 1879, v. 11, pp. 161–162.

List of parasites of *Aletia argillacea* [=*xylina*]; descriptions of *Trichogramma pretiosa* n. sp. [p. 161], *Cirrospilus* [= *Tetrastichus*] *esurus* n. sp. [p. 162], and *Tachina aletiæ* n. sp. [p. 162].

1713. RILEY, C. V. [Insect injurious to junipers.] <Ca. Ent., September, 1879, v. 11, p. 177.

Junipers on Long Island injured by *Dapsilia rutilana*.

1714. RILEY, C. V. The imported cabbage-worm in the South. <Farmer's Review, September, 1879. S.-b. No. 23, p. 106.

Spread of *Pieris rapæ* westward and southward; its present distribution; southern limit of distribution of *Doryphora 10-lineata*.

1715. RILEY, C. V. The shedding of the tracheæ and double cocoons. <Amer. Nat., October, 1879, v. 13, p. 652.

Review of two notes by E. Potts.

1716. RILEY, C. V. Leaf-galls on the grape-vine. <N. Y. Tribune, 1 October, 1879. S.-b. No. 23, pp. 117; 173. See: <Kansas Farmer, 26 November, 1879. S.-b. No. 26, p. 9. <West. Rural, 10 December, 1879.

Habits, ravages, reproduction, and distribution of *Phylloxera vastatrix*.

1717. RILEY, C. V. The Croton-bug as a library pest. <Library Journal, September–October, 1879, v. 4, p. 376.

Letter to Weston Flint; ravages of and means against *Blatta* [=*Ectobia*] *germanica*.

1718. RILEY, C. V. The Ailanthus silk-worm, *Attacus* (*Samia*) *cynthia*. <Science News, 15 October, 1879, v. 1, pp. 377–383. Extract: <Amer. Ent., March, 1880 [v. 3], n. s., v. 1, pp. 56–58, fig. 16. <Farmer's Review, 8 January, 1880, v. 4. S.-b. No. 23, pp. 167–168.

Description of eggs, larvæ, and imagos of *Samia* [=*Attacus*] *cynthia*; history, food-plants, acclimation, and artificial rearing of the same, and of *Samia* [=*Attacus*] *ricini*; differences between the eggs, larvæ, and cocoons of the two species; availability of these and other species for silk-culture; superiority of *Sericaria mori* for this purpose; occurrence of parthenogenesis and of retardation of development in *Bombycidæ*.

1719. RILEY, C. V. The cotton-worm. Letter from Prof. C. V. Riley on some recent cotton-worm articles in the News. <Galveston [Tex.] Daily News, 24 October, 1879, v. 38, No. 185, p. 2. S.-b. No. 23, pp. 164–165. Reply: <*Ibid.*, 31 October, 1879, No. 191, p. 4.

Critical review of W. J. Jones's "The cotton caterpillar," and of Investigator's "The cotton-worm;" denies that *Aletia argillacea* [=*xylina*] hibernates in the pupa state; author not interested in entomological discoveries for mercenary ends.

1720. RILEY, C. V. [Spread of *Pieris rapæ* into Alabama.] <Ca. Ent., October, 1879, v. 11, p. 196.

Pieris rapæ now quite common in Alabama; it has reached Selma but not Mobile.

1721. RILEY, C. V. Report of the entomologist. <Ann. Rept. [U. S.] Commissioner Agric. for 1878, 22 November, 1879, pp. 207–257, + 1 p. expl. of pl., pls. 1–7. Separate: <Washington, Octo-

1721. RILEY, C. V.—Continued.

ber, 1879, pp. 52 + 1 p. expl. of pl., 7 pl. Notice: <Gardener's Mo. and Hortic., November, 1879, v. 21, pp. 349–350. S.-b. No. 23, p. 29.

LETTER OF SUBMITTAL 207

INSECTS AFFECTING THE COTTON PLANT 210

Report of special investigations carried on in 1878, 210—Organization and personnel of the commission of inquiry, 210—Circular letter of inquiries, 210—Report of A. R. Grote, 213—Seasons, hibernation, and migrations of *Aletia argillacea* [= *xylina*], 213—Discovery of parasites, 214—Food-plants of the imago, 214.

THE SILK-WORM: A BRIEF MANUAL OF INSTRUCTIONS FOR THE PRODUCTION OF SILK 215

[A reprint of special report No. 11.] Culture of *Sericaria mori* in the United States, 215—Profits of producing cocoons, 217—Profits of reeling, 217—Profits in raising eggs, 218—Nature of the silkworm, 218—The egg, 219—The larva, 219—The cocoon, 220—The chrysalis, 221—The moth, 221—Enemies and diseases, 221—Muscardine, 221—Pébrine, 222—Other diseases, 223—Varieties or races, 223—Wintering and hatching the eggs, 224—Feeding and rearing the worms, 225—Preparation for spinning, 228—Gathering the cocoons, 229—Choking the chrysalis, 229—Egg-laying; reproduction, 230—Reeling, 232—Food-plants, 235—Glossary of terms used, 236.

THE GRAPE PHYLLOXERA 237

Importance of American grape-culture, 237—Grafting of vines, 237—Distribution of *Phylloxera*, 238—Hoplessness of means against, 238.

NOTES ON THE APPLE-WORM 238

Causes of the scarcity of *Carpocapsa pomonella* in Michigan, 238—Means against the same, 239.

THE WESTWARD PROGRESS OF THE IMPORTED CABBAGE-WORM 239

Spread of *Pieris rapæ*, 239—Means against the same, 239.

CHAPIN'S APPLE-LEAF SEWER, *Phoxopteris nubeculana* Clem 239

Habits and natural history, 239—Its injury to apple-trees, 239—Means against it, 239—Description of larva and chrysalis, 239—Synonymy, 239.

THE THICK-THIGHED WALKING-STICK, *Diapheromera femorata* Say 241

Vernacular names, 241—Nomenclature, 241—Characters, 241—Destructive powers, 241—Habits and natural history, 243—Its appearance every alternate year, 244—Natural enemies, 244—Remedies, 245—Description of egg, 245—The larva, 245.

THE GREAT ELM-LEAF BEETLE, *Monocesta coryli*, Say* 245

Past history, 245—Ravages, 246—Habits, 246—The eggs, 246—The larvæ, 246—Habits of larvæ, 246—The pupa, 246—Remedies, 247.

THE JUNIPER WEB-WORM, *Dapsilia rutilana*, Hübn 247

Importation, 247—Distribution in Europe, 247—Habits, 247—Remedies, 248—Description of larva, 248; of pupa, 248; of imago, 248.

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* Translation: <Acker- und Gartenbau-Zeitung, 1 June, 1880, v. 11, p. 87, fig. S.-b. No. 23, p. —.

1721. RILEY, C. V.—Continued.

THE CLOVER-ROOT BORER, *Hylesinus trifolii*, Müller * 248

Occurrence in New York, 248—Habits in Europe, 249—Food-plants, 249—Natural history, 249—Remedies, 250—Differential characters of *H. opaculus* and *H. trifolii*, 250—Enemies, 250—Description of larva, 250; of pupa, 250.

THE CLOVER-SEED MIDGE, *Cecidomyia leguminicola*, Lintner 250

Ravages in New York, 250—Habits, 251—Remedies, 251—Description of imago, 251—Larva, 252—Cocoon, 252—Pupal exuvium, 252—Comparative characters of *C. tritici*, *C. destructor*, and *C. leguminicola*, 252.

THE APPLE COLEOPHORA, *Coleophora malivorella*, n. sp. † 253

History, 253—Habits, 253—Injuries, 253—Larval habits, 254—Enemies and remedies, 254—Description of larva and imago, 254.

FULLER'S ROSE-BEETLE, *Aramigus fulleri* Horn 255

History, 255—Distribution, 255—Ravages, 255—Habits and characters of imago, 256—Remedies, 257—Description of egg, larva, and pupa, 257.

1722. RILEY, C. V. [Parasites bred from the cotton-worm.] <Ca. Ent., November, 1879, v. 11, p. 205.

Nine species of parasites have been bred from *Aletia argillacea* [= *xylina*].

1723. RILEY, C. V. The bee-moth. <N. Y. Tribune, 1879. Reprint: <Farmer's Review, 3 January, 1880. S.-b. No. 23, p. 158.

Description of larva and imago, habits, ravages, and means against *Galleria cereana*.

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* Translation: <Acker- und Gartenbau-Zeitung, 1 August, 1880, v. 11, p. 119, 2 figs. S.-b. No. 23, p. —. Extract: <Prairie Farmer, 22 November, 1879, v. 50, p. 370. S.-b. No. 23, pp. 168–169. <Amer. Rural Farmer, 18 December, 1879. S.-b. No. 45, pp. 23–24.

† Translation: <Acker- und Gartenbau-Zeitung, 1 September, 1880, v. 11, p. 135, fig. S.-b. No. 23, p. 182.

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1734. [RILEY, C. V.] Skippers injuring smoked hams. <Amer. Ent., January, 1880, [v. 3], n. s., v. 1, pp. 23–24.

Answer to communication from E. A. Smith; hams injured by larvæ of *Piophila casei*; means against these and other insects injuring hams.

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Answer to communication from S. A. Forbes; description of eggs and method of oviposition of *Tipula trivittata*?

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1736. RILEY, C. V.—Continued.

INTRODUCTORY 1

Text of circular sent out by the commission, 1—History of the investigation, 1—Need thereof, 2—Early work of Townend Glover, Thomas Affleck, and D. L. Phares, 2—Special report ordered by Congress, 3—Character of the Bulletin, 3—Division of the cotton-belt in the southern or hibernating and the northern or non-hibernating portions, 4—Practical aim of the commission, 4—Persons who have assisted, 4.

1. DESTRUCTIVENESS OF THE WORM 7

Losses occasioned by it 7

Increase of injury westward, 7—Least injury in northern portion of belt, 7—Tabular statement of loss for past 15 years, 8.

2. POPULAR AND SCIENTIFIC NAMES FOR THE INSECT 8

Most desirable popular name, 8—Different technical names by which the insect has been known, 8—Earliest description of it, 8.

3. CHARACTERS AND STAGES OF THE INSECT 9

The egg 9

The worm always hatched from an egg, 9—Where the egg is laid, 9—Number of eggs to a leaf, 10—All eggs perish during winter, 10—Other eggs mistaken for those of *Aletia*, 10.

The worm or larva 10

Character of newly-hatched worm, 10—Number of molts, 11—Variation in color, 11—Peculiar habits, 11—Flourishes on the cotton-plant only, 12.

The chrysalis 12

Duration of chrysalis state, 13—It never transforms below ground, 13—How it may be distinguished from other species, 13.

The moth or imago 13

Distinguishing characters of the moths, 14—Sexual differences, 14—Different habits at night and at day, 14—Fecundity, 15—It finds its natural food on the cotton-plant, 15—Fond of fruits, 15—Character of its tongue, 15.

4. TIME ELAPSING FROM ONE GENERATION TO ANOTHER 16

It varies greatly, but averages about one month, 16.

5. TIME OF YEAR WHEN THE FIRST WORMS APPEAR 16

Prevailing opinions erroneous, 16—The worms hatch in April, 16—First worms always in small numbers, 17—The third generation usually called the first, 17.

6. CONDITION OF SOIL AND PLANT CONNECTED WITH THE APPEARANCE OF THE FIRST WORMS 18

The worms appear first on low, moist, and rich lands, 18—Few exceptions to the rule, 18—The plant must be well advanced and luxuriant, 18—Some shelter generally near, 19—Reoccurrence year after year in the same spots, 19—Theory explaining first appearance under the circumstances observed, 19.

7. WET WEATHER FAVORS THE DEVELOPMENT OF THE WORMS 20

Humid and hot atmosphere most favorable, 20—Heavy storms destroy, 20—Effect of dryness, 21—Indirect influences of wet weather, 21—It prevents the working of the worm's natural enemies, 21.

1736. RILEY, C. V.—Continued.

8. NUMBER OF ANNUAL GENERATIONS 21

Prevailing general belief erroneous, 21—Early generations often overlooked, 22—Also often exterminated by natural enemies, 22—At least seven annual generations in southern portion of belt, and probably more, 22.

9. MIGRATIONS AND POWER OF FLIGHT OF THE MOTH 21

The moth has great power of wing, 23—It flies many hundreds of miles north of cotton belt, 23—Appearance of the worm on cotton first planted great distances from any other cotton thus accounted for, 23—Migrating habit developed only in later months when they become numerous, 24.

10. HIBERNATION 24

Different opinions and beliefs, 24—Difficulty surrounding the question, 24—Erroneous conclusions easily drawn, 25—Fallacy of the belief that the chrysalis winters underground, 25–26—Ability of the moth to survive the winter, 26—Other moths easily mistaken for it, 27—Theory of annual introduction of the species from some exotic country, 28—Arguments for and against the theory, 29, 30—Hibernation of the moth in the southern portion of the belt substantiated, 30—But a very small proportion of those which abound in the fall live to perpetuate their kind the next spring, 31—Localities where the moth hibernates, 31.

11. NATURAL ENEMIES 31

Vertebrates 33

Quadrupeds, birds, and reptiles that feed upon the worm, 32—Introduction of English sparrow, 33.

Invertebrates 33

Predaceous insects 33

Wasps, ants, and other Hymenoptera, 34—The good work of ants, 34—How they are drawn to a cotton-field by the aphides, 34—Beetles which prey upon the worm and others which presumably do so, 35—Enemies among the half-winged bugs or Heteroptera, 36—Among two-winged flies or Diptera, 36—Among nerve-winged insects or Neuroptera, 37.

Parasites 38

Previous belief that none preyed on *Aletia*, 38—Infesting the egg, 38—Infesting and issuing from the worm, 39—Flesh flies and *Tachina* flies, differences between them, 40–42—Issuing from the chrysalis, 42—A parasite known but not named in 1852—Ten distinct parasites infesting *Aletia*, and two other undetermined species, 47.

12. REMEDIES: MEANS OF COPING WITH THE INSECT 47

Favorable showing as to what has been accomplished in the South since the war, 48.

Prevention 48

Modes of cultivation, 48—Topping, 48—Use of early varieties, 48—Isolating fields, 48—Diversified agriculture, 49—Rotation of crops, 49—Protection of natural enemies, 49—Early *vs.* late planting, 49—Interspersing corn with cotton, 49—Jute, 49.

Mechanical means of killing the worms 49

Simple methods of brushing and dragging, 50.

Machines for brushing off the worms 50

1736. **Riley, C. V.**—Continued.

12. Remedies: Means of Coping with the Insect—Continued.

The Ewing brushing machine, 50—The Helm brushing machine, 51—The Wood-Smith brushing machine, 52—The Iske brushing machine, 53—Use of kerosene and coal oil with shallow pans or cloth frames, 54.

Poisoning the worms 54

Impetus given to invention by the use of mineral poisons, 54—Value of concerted action, 54—General principles to be observed in poisoning, 55—Dry *vs.* wet applications, 55—Advantage in being prepared, 55.

Arsenical compounds 55

Their value, 55—Safe and harmless where carefully used, 55—Caution necessary, 56—Antidote to arsenic poison, 56—Paris green, 56—When first recommended against the cotton-worm, 56—Its value, advantages, and disadvantages, 56—Modes of using it, 57—Patents issued for Paris green mixtures, 57—They should be disregarded, 58—Arsenic, 58—It causes the squares to fall, 58—Patent granted for its use in 1871, 59—Johnson's dead-shot, 59—Arseniate of soda, 59—Texas cotton-worm destroyer, 60—Lodi pest poison, 60.

London purple 60

Its nature, and how produced, 60—Its efficacy as an insecticide, 60—Analysis of, 60—It proves a valuable poison for the worms, 61—Cheaper than Paris green, 62—Its persistency, 62.

Pyrethrum powder 62

Its origin and nature, 62—Its remarkable insecticide qualities, 62—Most effectual on the cotton-worm, 63—Perfectly harmless to man, 63—The extract of the plant has the same virtue, 63—Growth of the plant in California, 63—Experiments conducted, 64—The alcoholic extract very potent, 64—Probable cost of using it, whether as powder or extract, 65—Highly encouraging prospects from its use, 65.

Kerosene oil 65

It causes instant death to the worm, but is difficult to apply without injuring the plant, 66—Vaporized by means of steam, 66—Used as a soap, 66.

Cotton-seed oil 66

Acts much as kerosene, 66—Made into soap with ashes from hull of seed, 66—Might be profitably used around oil factories, 66.

Carbolic acid 67

As a means of keeping off the moth, 67—Will not kill the worm without injuring the plant, 67.

Sulphur 67

Extracts or decoctions from various plants 67

Yeast ferment; fungus infection 68

Proposition by Dr. Hagen, 68—Dr. Bail's experiments, 68—Not in accord with the leading mycologists, 68—Experiments with beer-mash, 69—With beer-mash and yeast ferment, 70.

Machines and contrivances for powdering 74

Simple contrivance for mixing, 74—Ordinary method of applying dry poison, 75—Patented machines, 75—Hand duster, 75—The Willie duster, 75—The Hurd blower, 76—Combined duster

1736. **Riley, C. V.**—Continued.

12, Remedies: Means of Coping with the Insect—Continued.
and sprinkler, 78—The Davis duster, 78—The Levy duster, 79—The Taylor duster, 80—The Allen duster, 81—The Young duster, 81—The Goodheart duster, 81.

Machines and contrivances for sprinkling and spraying 81
Gray's hand sprinkler, 81—The Ruggles sprinkler, 82—The Ramsey sprinkler, 82—The Taylor sprinkling apparatus, 83—The Townsend sprinkler, 83—The Willie sprinkler, 84—The Shanck sprinkler, 84—Peck's spray machine, 84—Fountain pump, 85—Machines for spraying on a large scale, 85—The Goodin sprinkler, 85—The Yeager sprinkler, 86—The Ruhmann sprinkler, 87—The Johnson spray machine, 88—The Warner saddle sprinkler, 90—The Binkley atomizer, 90—The Schier atomizer, 91—Ruhmann's improved atomizer, 93—The Daughtry atomizer, 94.

Machines for applying vapors 97
The Steinmann vaporizer, 97—The Pearl vapor generator, 99.

Destruction of the moth.. 100
Results so far not encouraging, 100—Action must be taken early in the season, 100.

Lamps for attracting the moth 100
Usually resorted to when too late to do practical good, 100—Fires, 100—Trouble of keeping them up throughout the night, 101—Beneficial insects killed by lamps and fires, 101—Advantage of lamps, 101—The Garrett lamp, 101—The Binkley lamp, 102—The McQueen lamp, 103—The Rigel lamp, 103—The Walker lamp, 103—Simple form of lamp, 104—The Pugh lamp, 104—Lamps in motion, 105—Le Blanc's cotton-moth destroyer, 105—The Fordtran cotton-moth destroyer, 105.

Poisoned sweets and fluids as means of destroying the moth....... 106
Sweets attractive, 106—Ripe fruits and melons often suffer, 106—Baits that allure and kill, 106—Experiments with them, 107—Moths less attracted during summer than in autumn, 107—Little inducement to use baits in autumn, 108—They are most beneficial in spring, 108—White rags, 108—Theory of Dr. J. L. Lupton, 108.

Appendix 109
Answers to circular from West Feliciana Parish, Louisiana, 109—From Evergreen, Ala., 111—From Henderson, Tex., 113—From Hempstead, Tex., 115—Different views as to hibernation and mode of perpetuation of the insect, 116—Answers to circular from Livingston, Ala., 117—From Parish of Concordia, La., 119—From Natchitoches, La., 122—From Jackson, Miss., 126—From Larissa, Tex., 127—From Perry County, Ala., 128—From Walterborough, S. C., 128—From Jamestown, Fla., 130—From San Antonio, Tex., 131—From Kirkwood, Miss., 133—From Woodville, Miss., 135.

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Notes from various sources upon the phytophagous habits of *Carabidæ.*

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Review of T. J. Burrill's "The pear-leaf blister"; ravages of *Typhlodromus pyri* on leaves of pear-tree; characters of this mite; noxious habits of *Acarina*, especially of *Phytoptus.*

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Answer to communication from S. A. Forbes; two kinds of eggs found in stomach of cat-bird; these birds eat gravid females of *Tipula.*

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Answer to letter from P. H. M.; larva of *Cryptorhopalum* sp. supposed to have injured grains of wheat, was probably feeding on the remains of true grain insects; food-habits of larvæ of *Dermestidæ.*

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Answer to letter from H. G. Wolcott; habits, food-plants, and means against *Amphicerus bicaudatus*: figure of male and female imago and of bored apple-twigs; habits and food-plants of *Sinoxylon basillare* and of *Bostrichus.*

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Answer to letters from T. Pollard and G. W. S.; food-plants, general appearance, vernacular name, urticating properties and description of imago of *Lagoa opercularis.*

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Figures larva, pupa, and imago of ***Anthrenus scrophulariæ***; food-plants and habits of imago and ravages of larva; importation, distribution, vernacular names of and means against the same.

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Method of obtaining eggs of ***Sericaria mori*** and information on silk culture.

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Occurrence of ***Scolytus quadrispinosus*** in Washington Territory.

1755. [RILEY, C. V.] [Tenacity of life.] <Amer. Ent., March, 1880 [v. 3], n. s., v. 1, p. 68.

Resistance of ***Cleonus*** sp. to the influence of various insecticides.

1756. [RILEY, C. V.] [*Danais archippus.*] <Amer. Ent., March, 1880 [v. 3], n. s., v. 1, p. 73.

Occurrence of a colorational variety on the island of Antigua.

1757. [RILEY, C. V.] Reports of the U. S. Entomological Commission. <Amer. Ent., March, 1880 [v. 3], n. s., v. 1, p. 73.

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1758. [RILEY, C. V.] [Habits of the cotton-moth.] <Amer. Ent., March, 1880 [v. 3], n. s., v. 1, p. 74.

Request for information on the habits of the imago and the food-plants of the larva of ***Aletia argillacea*** [=***xylina***] during March and April.

1759. [RILEY, C. V.] *Typhlodromus pyri.* <Amer. Ent., March, 1880 [v. 3], n. s., v. 1, p. 74.

Reference to early account of the pear-leaf blister-mite.

1760. [RILEY, C. V.] Food-habits of ground-beetles. <Amer. Ent., March, 1880 [v. 3], n. s., v. 1, p. 75.

Note on request of S. A. Forbes for *Carabidæ* found in situations suggesting herbivorous habits.

1761. [RILEY, C. V.] Moths and butterflies caught by the tongue. <Amer. Ent., March, 1880 [v. 3], n. s., v. 1, p. 75.

Notice of several articles on the capture of *Noctuidæ* and *Sphingidæ* by the flowers of *Physianthus albens*; capture of *Sphingidæ* by the flowers of *Nerium oleander* and *Œnothera grandiflora*, and of *Syrphus* sp. by the flowers of *Bidens chrysanthemoides*.

1762. [RILEY, C. V.] [Queen bees in the mails.] Amer. Ent., March, 1880 [v. 3], n. s., v. 1, p. 75.

Circumstances under which queen bees may be sent by mail; exclusion of pinned insects from the same.

1763. [RILEY, C. V.] Common tiger-beetle. <Amer. Ent., March, 1880 [v. 3], n. s., v. 1, pp. 77–78.

Answer to inquiry of J. L. Seney; habitat, distribution, and food-habits of *Cicindela repanda*.

1764. [RILEY, C. V.] Gall on *Pelargonium*. <Amer. Ent., March, 1880 [v. 3], n. s., v. 1, p. 78.

Answer to letter from Mary Treat; gall at base of *Pelargonium* probably made by a mite; the *Poduræ* found in it were undoubtedly feeding on diseased gall-tissue.

1765. [RILEY, C. V.] Catalogues and monographs of insects. <Amer. Ent., March, 1880 [v. 3], n. s., v. 1, p. 78.

Answer to letter of P. S. B.; mention of monographic works and catalogues of North American insects.

1766. [RILEY, C. V.] Leaf-hoppers injuring wheat fields. <Amer. Ent., March, 1880 [v. 3], n. s., v. 1, p. 78.

Answer to letter of R. L. B.; habits and ravages of *Cicadula exitiosa*, *Diedrocephala flaviceps*, and *Jassus* sp. in the southern United States, and of *Jassus sexnotatus* in Europe; means against the same.

1767. RILEY, C. V. A new leaf-hopper injurious to small grain. <Amer. Ent., March, 1880 [v. 3], n. s., v. 1, p. 78.

Description of *Diedrocephala flaviceps* n. sp. injurious to wheat and oats in Texas in 1876.

1768. RILEY, C. V. The bird question dispassionately considered. <Farmer's Review, 1 April, 1880, v. 4, p. 211. S.-b. No. 23, pp. 147–148.

Extract from E. Perris's "Birds *vs.* Insects," with introductory; conclusions as to the value of birds in agriculture as destroyers of noxious insects.

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Date and manner of first appearance of larvæ of *Aletia argillacea* [=*xylina*]; number of annual generations and the existence of parasites upon it; his-

1769. RILEY, C. V.—Continued.

tory and refutation of the annual immigration theory; division of the cotton belt into regions wherein, respectively, *A. argillacea* [=*xylina*] is permanent and temporary; food-habits and enemies of the same.

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Migratory flights of Lepidoptera supposed to be due to excessive multiplication of individuals and to a true migratory instinct; directions, times, and extent of migrations of *Danais archippus*; explanation of the migratory instinct; distribution of *D. archippus* and *Pyrameis cardui*; figures the former and its manner of clustering.

1771. [RILEY, C. V.] Gouty gall on blackberry and raspberry canes. <Amer. Ent., April, 1880 [v. 3], n. s., v. 1, p. 107.

Answer to letters of P. S., T. A. C., and J. W.; seasons, ravages of and means against *Agrilus ruficollis*.

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Impracticability of W. J. W.'s suggestion as indicated in title.

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Answer to inquiry of D. B. Woodbury; food-plants of *Tolype velleda*.

1774. [RILEY, C. V.] Moths caught in Alabama: Muscle-shaped bark-louse on apple-trees South <Amer. Ent., April, 1880 [v. 3], n. s., v. 1, pp. 107–108.

Mentions several insects received from J. F. Bailey, of Marion, Ala.; larva of *Papilio philenor* feeds on *Aristolochia*; *Bombus virginicus* ♀ robs hives of *Apis mellifica*; *Mytilaspis pomicorticis* [=*pomorum*] not before received from so far south; means against the same.

1775. [RILEY, C. V.] Chrysalides supposed to be those of *Aletia*. <Amer. Ent., April, 1880 [v. 3], n. s., v. 1, p. 108.

Answer to letter of W. J. Jones; pupæ of *Agrotis inermis* [=*saucia*] and *Prodenia lineatella* from cotton field.

1776. [RILEY, C. V.] Apple-twig borer. <Amer. Ent., April, 1880 [v. 3], n. s., v. 1, p. 108.

Answer to inquiry of T. V. M.; occurrence and habits of *Amphicerus bicaudatus*.

1777. [RILEY, C. V.] Clover-weevil. <Amer. Ent., April, 1880 [v. 3], n. s., v. 1, p. 108.

Answer to inquiry of W. W. F.; several "weevils" infest clover-seeds; *Hylesinus trifolii* infests the roots and lower part of the stem.

1778. [RILEY, C. V.] Effects of cold applied to the chrysalides of butterflies. <Amer. Ent., May, 1880 [v. 3], n. s., v. 1, pp. 110–111.

Notice of the experiments of W. H. Edwards; effects of hibernation in the chrysalis and imago states.

1779. [RILEY, C. V.] Moth issuing from a larva. <Amer. Ent., May, 1880 [v. 3], n. s., v. 1, p. 114.

Notice of J. J. Weir on the issuance of *Orgyia* sp. from the larva without passing through the pupal stage.

1780. [RILEY, C. V.] The rose-slug. <Amer. Ent., May, 1880 [v. 3], n. s., v. 1, pp. 115–116, figs. 42–43.

Description of eggs, larvæ, and imago, history and means against *Selandria* [=*Monostegia*] *rosæ*; figures, egg, larvæ, imago, with details of structure, and injured leaf.

1781. [RILEY, C. V.] Dr. Asa Fitch. <Amer. Ent., May, 1880 [v. 3], n. s, v. 1, pp. 121–123.

Biographical sketch of Asa Fitch, with notice of his collection of insects and his writings.

1782. [RILEY, C. V.] Flea-beetle on young tobacco plants. <Amer. Ent., May, 1880 [v. 3], n. s., v. 1, p. 123.

Leaves of *Nicotiana tabacum* eaten by *Epitrix hirtipennis* [=*Crepidodera parvula*] and probably by *E.* [=*C.*] *cucumeris*; leaves of *Solanum* eaten by the first named and by *E.* [=*C.*] *brevis*; distribution of these and other species of *Epitrix* [=*Crepidodera*].

1783. [RILEY, C. V.] The proboscis of the common house-fly. <Amer. Ent., May, 1880 [v. 3], n. s., v. 1, p. 125.

Review of paper by G. Macloskie.

1784. [RILEY, C. V.] Notes on South American Lepidoptera. <Amer. Ent., May, 1880 [v. 3], n. s., v. 1, pp. 125–126.

Report of meeting of the Entomological Society of London; length of proboscis of and presence of scent organ in *Sphingidæ*; perception of colors in *Rhopalocera*; secondary sexual character in *Callidryas* and other genera; according to R. Meldola the proboscis of *Macrosila cluentius* is 23.5^{cm} (9¼ inches) long.

1785. [RILEY, C. V.] Floating apiaries. <Amer. Ent., May, 1880 [v. 3], n. s., v. 1, pp. 126–127.

Notice of an unsuccessful attempt to increase the product of an apiary by floating it southward late in the season and back to the north in the spring, on the Mississippi River.

1786. [RILEY, C. V.] American *Staphylinidæ* wanted. <Amer. Ent., May, 1880 [v. 3], n. s., v. 1, p. 127.

Notice of A. Fauvel's works on *Staphylinidæ* and his request for additional material.

1787. [RILEY, C. V.] Probable parthenogenesis in the Hessian fly. <Amer. Ent., May, 1880 [v. 3], n. s., v. 1, p. 127.

Review of paper by H. A. Hagen; *Cecidomyia destructor* less injurious than formerly in the older wheat-growing regions, its area of abundance having moved westward with the westward extension of wheat culture.

1788. [RILEY, C. V.] Raspberries destroyed by weevils. <Amer. Ent., May, 1880 [v. 3], n. s., v. 1, p. 127.

Ravages of *Otiorhynchus picipes* in England; warning against its introduction into the United States.

1788*a*. [RILEY, C. V.] Cotton culture and the insects affecting the plant at Bahia, Brazil. <Amer. Ent., May, 1880 [v. 3], n. s., v. 1, pp. 128–129.

Letter of R. A. Edes, with remarks on specimens sent.

1789. [RILEY, C. V.] Hemispherical larva at bottom of ant hill. <Amer. Ent., May, 1880 [v. 3], n. s., v. 1, p. 129.

Answer to inquiry of D. S. Sheldon; habitat of larva of *Microdon globosus*.

1790. [RILEY, C. V.] Chrysalides dug up in cotton field, mistaken for those of the cotton-worm. <Amer. Ent., May, 1880 [v. 3], n. s., v. 1, p. 129.

Answer to letter of R. Worrel.

1791. [RILEY, C. V.] *Aleurodes* on *Oxalis*. <Amer. Ent., May, 1880 [v. 3], n. s., v. 1, pp. 129–130.

Answer to letter of S. A. Conrad; description of all stages of *Aleurodes* sp. from leaves of *Oxalis* sp.

1792. [RILEY, C. V.] Larvæ in stomach of black-bass. <Amer. Ent., May, 1880 [v. 3], n. s., v. 1, p. 130.

Answer to inquiry of S. A. Forbes; two coleopterous larvæ from the stomach of *Micropterus salmoides*; one a dytiscid, the other perhaps a dascyllid.

1793. [RILEY, C. V.] Insects from stomach of rock-bass. <Amer. Ent., May, 1880 [v. 3], n. s., v. 1, p. 130.

Answer to letter of S. A. Forbes; coleopterous larva from the stomach of common sun-fish (*Lepiopomus pallidus*) and rock-bass (*Roccus lineatus*).

1794. [RILEY, C. V.] New enemy to sugar-cane. <Amer. Ent., May, 1880 [v. 3], n. s., v. 1, p. 130, fig. 48.

Answer to letter of D. Th.; ravages of *Ligyrus rugiceps* upon sugar-cane, maize, and grasses; recommends use of lamp and kerosene pan, and figures one form of such apparatus.

1795. [RILEY, C. V.] Parasites of the plum Curculio. <Amer. Ent., May, 1880 [v. 3], n. s., v. 1, pp. 131–132, figs. 49–50.

Answer to letter of W. S. Barnard; quotes from 3d Ann. Rept. State Ent. Mo., pp. 24–26; habits of *Sigalphus curculionis*; habits, varieties, and figures of all stages of the same; food-habits of *Semasia* [= *Grapholitha*] *prunivora* on which the *Sigalphus* is parasitic.

1796. [RILEY, C. V.] Blister-beetles from New Mexico. <Amer. Ent., May, 1880 [v. 3], n. s., v. 1, p. 132.

Answer to inquiry of J. M.; *Macrobasis albida* common in the Southwest and valuable as a vesicant; *Diplotaxis* not known to be a vesicant.

1797. [RILEY, C. V.] Abnormal cocoon. <Amer. Ent., May, 1880 [v. 3], n. s., v. 1, p. 132.

Answer to letter of W. S. Barnard; occurrence of *Callosamia* [= *Attacus*] *promethea* and *Orgyia antiqua* at Ithaca, N. Y.; description of abnormal cocoon of the latter found on sugar-maple.

1798. [RILEY, C. V.] Insects found about orange-trees. <Amer. Ent., May, 1880 [v. 3], n. s., v. 1, p. 132.

Answer to inquiry of J. S. Barnwell; list of insects from Darien, Ga.; most of them have no relation to orange trees; notes on *Aphis* sp., *Chilocorus bivulnerus*, *Syrphus* sp., *Neoclytus erythrocephalus*, *Drasterius amabilis*, *Platynus punctiformis*, *Forficula* sp., *Gryllotalpa borealis*, and *Psocus venosus*.

1799. [RILEY, C. V.] *Luperus brunneus*, Crotch. <Amer. Ent., May, 1880, [v. 3], n. s., v. 1, p. 132.

Luperus noxius Riley MSS., is a pale form of *L. brunneus*; description of the typical and other forms of the same; distinctive characters of *L. brunneus* and *L. morulus* from other North American species and from each other; characters of the genus *Calomicrus*.

1800. [RILEY, C. V.] Professor Riley on army-worms. <N. Y. Weekly Sun, 20 June, 1880. S.-b. No. 26, p. 89.

Interview with reporter; summary of present knowledge of *Leucania unipuncta*.

1801. RILEY, C. V. Cotton-caterpillars. <Selma [Ala.] Times, 25 June, 1880.

1802. RILEY, C. V. Notes on our commoner insects. <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, pp. 133, 134, figs. 51–52.

Description and figures of larva, pupa, cocoon, and imago of *Arctia* [= *Pyrrharctia*] *isabella*; habits, seasons, food-plants, parasites, vernacular names and variations of the same; figure of *Ophion macrurum*; descriptions of *Ichneumon cœruleus*, *I. signatipes*, and *Trogus obsidianator*; description of larva of *Ecpantheria scribonia*.

1803. RILEY, C. V. The white-grub fungus. <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, pp. 137–140, figs. 53–55.

Description and figures of *Torrubia ravenelii* and of its fructification; forms in which it occurs on larvæ of *Lachnosterna quercina* [= *fusca*]; list of some articles upon it; its synonymy and distribution; list of related species and their distribution; occurrence of related species on other insects.

1804. RILEY, C. V. The true and the bogus Yucca moth, with remarks on the pollination of Yucca. <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, pp. 141–145.

History of observations on *Prodoxus decipiens*; habits, parasite, and food-plants of the same; evolution of *Prodoxus* and *Pronuba*; criticism of errors resulting from mistaking *Prodoxus decipiens* for *Pronuba yuccasella*; failure of *Yucca angustifolia* to become fertilized in the absence of *Pronuba yuccasella*; *Hyponomeuta quinquepunctella* Chambers is the same as *Prodoxus decipiens*.

1805. [RILEY, C. V.] Intermittance of phosphorescence in fire-flies. <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, p. 146.

Criticism of a discussion before the London Entomological Society; the winged imagos of *Lampyridæ* can intermit their light; the larvæ and wingless imagos can suppress their light.

1806. [RILEY, C. V.] Grain Aphis *vs.* rust. <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, p. 147.

Ravages of *Aphis avenæ* [*Nectarophora granaria*] and of rust on wheat and oats in Georgia; the work of aphides promotes the growth of some kinds of rust.

1807. [RILEY, C. V.] Mold and Phylloxera. <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, p. 147.

Criticism of statements by Rommier; development of mycelium on phylloxerized roots does not result in the destruction of the *Phylloxera*.

1808. [RILEY, C. V.] Infecting Phylloxera with fungus disease. <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, p. 148.

Abstract of discussion at meeting of Académie des Sciences de Paris on the infection of *Phylloxera vastatrix* by parasitic fungi; particular fungi infect only particular insects; method of experimentation to determine which fungi to use and how to apply them; improbability of success in these experiments.

1809. [RILEY, C. V.] Fungus in Cicada. <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, p. 148.

Notice of C. H. Peck's description and J. Leidy's note on *Massospora cicadina*; *Cicada* [= *Tibicen*] *septendecim* and *C.* [= *T.*] *tredecim* subject to the attacks of the same.

1810. [RILEY, C. V.] On the nature of the phosphorescence of the glow-worm. <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, p. 148.

Conclusions drawn by Jousset de Bellesme; probability that the phosphorescent substance is a gaseous product; nature of phosphorescence.

1811. [RILEY, C. V.] Death of mules caused by insects. <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, p. 148.

About 6,000 mules reported killed in the Ouachita Valley, Louisiana, by the attacks of *Simulium* sp.

1812. [RILEY, C. V.] [May beetles swarming in Alabama.] <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, p. 148.

Abundance and ravages of *Lachnosterna quercina* [=*fusca*] on oak-trees around Mobile, Ala., in May, 1880.

1813. [RILEY, C. V.] Fungus diseases of beneficial insects. <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, p. 149.

Abstract of communication by C. Brongniart and Max Cornu on an epizootic among *Syrphus mellinus* caused by a species of *Entomophthora*; almost all insecticides liable to the objection that they kill useful as well as noxious insects.

1814. [RILEY, C. V.] Early appearance of cotton-worm. <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, p. 149.

Extracts from letter of J. M. Bell and from the Goliad [Tex.] Guard and from G. Witting on the date of appearance of *Aletia argillacea* [= *xylina*] in Texas.

1815. [RILEY, C. V.] The butterfly tongue. <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, p. 149.

Notice of and extract from paper by E. Burgess; conclusions as to the manner in which butterflies imbibe their liquid food.

1816. [RILEY, C. V.] Cottony maple scale. <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, p. 149.

Notice of J. D. Putnam on *Pulvinaria innumerabilis*.

1817. [RILEY, C. V.] Necrological. <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, p. 150.

Obituary notices of E. A. H. v. Kiesenwetter, S. C. Snellen van Vollenhoven, and F. L. de Laporte.

1818. [RILEY, C. V.] Effects of severe cold on insects. <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, p. 150.

A steady even if severe winter not prejudicial to insect life.

1819. [RILEY, C. V.] Revision of the *Lampyridæ.* <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, p. 150.

Notice of H. S. Gorham's work on the *Lampyridæ* and his request for additional material.

1820. [RILEY, C. V.] Apple-twig borer. <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, p. 151.

Answer to inquiry of A. S. H.; occurrence of *Amphicerus bicaudatus* on apple-trees in Virginia.

1821. [RILEY, C. V.] Grape-vine flea-beetle. <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, pp. 152–153.

Answer to letter of J. Nilis; ravages of *Graptodera* [= *Haltica*] *chalybea* on grape-vines in Pennsylvania.

1822. [RILEY, C. V.] Cynipid gall on oak twigs. <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, p. 153, fig. 56.

Answer to letter of J. A. Warder; figure of gall of *Cynips* (n. sp.?) from twig of *Quercus prinus* var. *acuminata*; comparison of this gall with that of *C.* [=*Andricus*] *q.-punctata*; the flies bred from these galls issue in spring and are all females, but probably have a bisexual form producing a different gall.

1823. [RILEY, C. V.] White-grub fungus. <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, p. 153.

Answer to letter of H. S.; occurrence of *Torrubia ravenelii* at Iola, Kans.

1824. [RILEY, C. V.] *Galerita janus.* <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, p. 153, fig. 57.

Answer to inquiry of H. D. M. Fair; distribution, habitat, transformations, and seasons of *Galerita janus*; figure of larva of *G. lecontei.*

1825. [RILEY, C. V.] Not Fuller's rose-beetle. <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, pp. 153–154, fig. 58.

Answer to inquiry of J. Stewart; habits and synonymy of *Agonoderus comma* [=*pallipes*]; figure of the same.

1826. [RILEY, C. V.] Not *Aletia* chrysalides. <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, p. 154.

Answer to letter of G. P. White; pupæ of *Agrotis saucia* from cotton fields; food-habits of larva; ravages of *Aletia argillacea* [=*xylina*] at Brown Station, Ala., in August, 1879.

1827. [RILEY, C. V.] Mud-wasp and parasite. <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, p. 154, figs. 59–60.

Answer to inquiries of Mary Treat; nidification of several species of *Odynerus*; food-habits of *O. birenimaculatus*; figure of *O. flavipes* and of a nest of *Odynerus* sp.; figure of *Cryptus junceus.*

1828. [RILEY, C. V.] Monographs again. <Amer. Ent., June, 1880, [v. 3], n. s., v. 1, pp. 154–155.

Answer to letter of C. D. Marsh; references to works. *Elateridæ, Curculionidæ* and *Coccidæ.*

1829. [RILEY, C. V.] Rearing wood-borers. <Amer. Ent., June, 1880 [v. 3], n. s., v. 1, p. 155.

Answer to letter of W. H. Harrington; directions for rearing larvæ which bore in wood or under bark.

1830. Riley, C. V. On a new tineid genus allied to *Pronuba*, Riley. <Amer. Ent., June, 1880, [v. 3], n. s., v. 1, pp. 155–156.

Description of *Prodoxus* n. g. [p. 155] of *Tineina* and of larva, pupa, and imagos of *P. decipiens* n. sp. [p. 155].

1831. Riley, C. V. A parasite on *Prodoxus decipiens*. <Amer. Ent., June, 1880, [v. 3], n. s., v. 1, p. 156.

Description of larva and imago of *Exothecus prodoxi* n. sp.; habits of larva.

1832. Riley, C. V. How to manage the cotton-worm: Suggestions to cotton planters. <Farmer's Review, 8 July, 1880. S.-b. No. 24, p. 68.

Means against *Aletia xylina*.

1833. [Riley, C. V.] The cotton-worm investigation. <Selma [Ala.] Morning Times, 21 July, 1880, v. 55, No. 190, p. 3. Reprint: <Amer. Ent., August, 1880 [v. 3], n. s., v. 1, p. 197.

List of persons engaged in the cotton-worm investigation; statement of work to be done by each.

1834. [Riley, C. V.] A foe to cottonwood. <Amer. Ent., July, 1880 [v. 3], n. s., v. 1, pp. 159–161, figs. 61–64. Extract: <Suppl. to Amer. Ent., July, 1880, p. 1.

Description of egg, larva, and imago and figures of all stages of *Melasoma* [= *Lina*] *scripta*; description and figures of variations of the imago; habits, ravages, seasons, food-plants, and means against the same; figure of *M.* [= *L.*] *lapponica* and of larva of *M.* [= *L.*] *populi*; description of these larvæ and of that of *M.* [= *L.*] *tremulæ*; food-plants and distribution of these species; acquisition of new habits by insects.

1835. [Riley, C. V.] The northern army-worm. <Amer. Ent., July, 1880 [v. 3], n. s., v. 1, pp. 170–171, figs. 72–75.

Ravages of *Leucania unipuncta* in 1880; natural history, means against, description, and figures of all stages of the same.

1836. [Riley, C. V.] The periodical Cicada. <Amer. Ent.. July, 1880 [v. 3], n. s., v. 1, pp. 172–173, fig. 76.

Broods of *Cicada* [= *Tibicen*] *septendecim* and *C.* [= *T.*] *tredecim* which appear in 1880.

1837. [Riley, C. V.] Use of guano for grape Phylloxera. <Amer. Ent., July, 1880 [v. 3], n. s., v. 1, p. 173. Reprint: <Suppl. to Amer. Ent., July, 1880, p. 2.

Application of sulphide of carbon with infusorial earth or guano.

1838. [Riley, C. V.] Fertilizers of alpine flowers. <Amer. Ent., July, 1880 [v. 3], n. s., v. 1, p. 175. Reprint: <Suppl. to Amer. Ent., July, 1880, p. 2.

Relative frequency, according to H. Müller, of the visits of insects to flowers in high alpine regions as compared with such visits at lower levels.

1839. [Riley, C. V.] Carnivorous habits of caddis-worms. <Amer. Ent., July, 1880 [v. 3], n. s., v. 1, p. 176.

Notice of paper by G. C. Goody.

1840. [RILEY, C. V.] Development of the eyes and luminosity in the fire-flies. <Amer. Ent., July, 1880 [v. 3], n. s., v. 1, p. 176.

Abstract of H. S. Gorham's observations.

1841. [RILEY, C. V.] Grape Phylloxera not at the Cape. <Amer. Ent., July, 1880 [v. 3], n. s., v. 1, p. 176. Reprint: <Suppl. to Amer. Ent., July, 1880, p. 1.

Examination of roots of unhealthy vines by R. McLachlan and R. Trimen show that the disease of the vines is not caused by *Phylloxera vastatrix.*

1842. [RILEY, C. V.] [Bill providing for the extermination of insects.] <Amer. Ent., July, 1880 [v. 3], n. s., v. 1, pp. 176–177.

Text of and comments on a bill introduced into the California Assembly, providing for the extermination of insects.

1843. [RILEY, C. V.] [Appropriation for the U. S. Entomological Commission.] <Amer. Ent., July, 1880 [v. 3], n. s., v. 1, p. 177.

Notice of the appropriation by Congress of $25,000 for completing the work of the U. S. Entomological Commission.

1844. [RILEY, C. V.] Pronuba *vs.* Prodoxus. <Amer. Ent., July, 1880 [v. 3], n. s., v. 1, pp. 177–178.

Comments on letter of V. T. Chambers.

1845. [RILEY, C. V.] Interesting cotton-worm notes from Vera Cruz, Mexico. <Amer. Ent., July, 1880 [v. 3], n. s., v. 1, p. 179. Reprint with slight omission: <Suppl. to Amer. Ent., July, 1880, p. 3.

Letters from S. T. Trowbridge and R. de Zayas Enriquez, with notes on the irregular occurrence of *Aletia argillacea* [=*xylina*] in Vera Cruz.

1846. [RILEY, C. V.] Clover-root borer. <Amer. Ent., July, 1880 [v. 3], n. s., v. 1, pp. 179–180, fig. 81. Reprint: <Suppl. to Amer. Ent., July, 1880, p. 4. See: <Prairie Farmer, 31 July, 1880. S.-b. No. 45, p. 15.

Answer to letter of W. A. Henry; description and figures of larva, pupa, and imago of *Hylesinus trifolii*; ravages, habits, and means against the same.

1847. [RILEY, C. V.] Mud-wasp and spider egg-nest. <Amer. Ent., July, 1880 [v. 3], n. s., v. 1, p. 180, figs. 82–84.

Answer to letter of Mary Treat; figures of cells and of imago of *Eumenes fraterna,* which stores its cells with larvæ of *Paleacrita vernata*; figure and descriptions of egg-nests of *Epeira* sp.

1848. [RILEY, C. V.] Worm in joints of wheat. <Amer. Ent., July, 1880 [v. 3], n. s., v. 1, pp. 180–181, fig. 85. Reprint: <Suppl. to Amer. Ent., July, 1880, p. 4.

Answer to letter of J. K. P. Wallace; ravages of an unknown, apparently hymenopterous, larva in wheat-stalks; figure of larva and pupa of *Meromyza americana* and of stalks injured by the same.

1849. [RILEY, C. V.] Linden and ash destroyers. <Amer. Ent., July, 1880 [v. 3], n. s., v. 1, p. 181. Reprint: <Suppl. to Amer. Ent., July, 1880, p. 4.

1849. RILEY, C. V.—Continued.

Answer to letter of Shelby Reed; season of appearance of *Odontota rubra* on *Tilia*; larvæ of *Hyphantria textor* [=*cunea*] feeding on the same; *Saperda calcarata* boring in poplar, and an unknown larva (*Neoclytus capræa?*) boring in black-ash.

1850. [RILEY, C. V.] Larva boring along the axis of apple-twigs. <Amer. Ent., July, 1880 [v. 3], n. s., v. 1, p. 181.

Answer to letter of T. V. Munson; twigs of apple-trees bored by larvæ of *Oberea* sp.?

1851. [RILEY, C. V.] Aquatic larvæ. <Amer. Ent., July, 1880 [v. 3], n. s., v. 1, p. 181.

Answer to letter of S. A. Forbes; larvæ of *Anax junius* and *Palingenia* [=*Hexagenia*] *bilineata* named; the latter common in the stomach of fishes.

1852. [RILEY, C. V.] First appearance of cotton-worm in prairie belt. Amer. Ent., July, 1880 [v. 3], n. s., v. 1, p. 181. Reprint: <Suppl. to Amer. Ent., July, 1880, pp. 3–4.

Answer to letter of J. F. Bailey; larvæ of *Aletia argillacea* [=*xylina*] appear first on lands where the cotton is luxuriant.

1853. [RILEY, C. V.] *Gyrinus* larva; terrestrial insects in stomach of shad. <Amer. Ent., July, 1880 [v. 3], n. s., v. 1, p. 182.

Answer to letter of S. A. Forbes; character of larva of *Gyrinus*; a mass of terrestrial insects including *Typhlocyba vitis*? a muscid, a Eurytomid, *Jassus* sp., *Triphleps insidiosus*, and other species from the stomach of Ohio shad.

1854. RILEY, C. V. Further remarks on the differences between *Pronuba* and *Prodoxus*. <Amer. Ent., July, 1880 [v. 3], n. s., v. 1, p. 182.

Differences between *Pronuba yuccasella* and *Prodoxus decipiens* in the form, sculpture, and color of the terminal joint, and of the ovipositor.

1855. [RILEY, C. V.] The grape-vine flea-beetle, *Graptodera chalybea* Illig. <Amer. Ent., August, 1880 [v. 3], n. s., v. 1, pp. 183–184, fig. 86.

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Progress of knowledge upon the number of annual generations of *Leucania unipuncta*; stages of growth at which it hibernates; the destructive generation probably not the first of the season; explanation of the partial efficacy of the burning of fields in winter as a means against this insect; connection of wet and dry seasons with its increase; its natural habits; errors of A. Fitch.

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Record of experiments by W. A. Henry upon the effect of Pyrethrum powder on *Halticidæ*, *Meloidæ*, *Pieris rapæ*, *Coreus* [= *Anasa*] *tristis*, and *Blattidæ*; and of the fumes of burning pyrethrum on various insects.

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Ravages of *Doryphora 10-lineata* in Coos County, N. H., in 1879.

1860. [RILEY, C. V.] Retarded development in a blister-beetle. <Amer. Ent., August, 1880 [v. 3], n. s., v. 1, p. 196.

Final transformations of individuals from a single batch of eggs of *Epicauta vittata* occurring at the first, second, and third year after hatching.

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Experiments by W. S. Barnard upon the effect of alcoholic extracts of the flowers and stems of the ox-eye daisy on insects; "no evidence that they will prove of any practical value."

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Directions for sowing the seeds and cultivating the plants of pyrethrum.

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Notice of the appointment of J. A. Lintner as State Entomologist of New York.

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Meeting of the U. S. Entomological Commission; plan of work to be done in 1880–1881; partial list of persons engaged in the work.

1865. [RILEY, C. V.] [Number of entomologists in Europe.] <Amer. Ent., August, 1880 [v. 3], n. s., v. 1, p. 198.

Tabulation of the number of entomologists of the several countries of Europe.

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Commendation of the above work and of the supplementary list of *Elateridæ* by E. Candèze; need of co-operation for the completion of the whole catalogue.

1867. [RILEY, C. V.] Carnivorous propensity of plant-feeders. <Amer. Ent., August, 1880 [v. 3], n. s., v. 1, p. 200.

Larvæ of *Plusia brassicæ* devour those of *Pieris rapæ* and *Pionea rimosalis* in default of more natural food.

1868. [RILEY, C. V.] Beetles injuring cabbages and fuchsias. <Amer. Ent., August, 1880 [v. 3], n. s., v. 1, p. 200, fig. 106.

Answer to letter of G. T.; ravages, distribution, and figures of *Epicærus imbricatus*; description of eggs, ravages, food-plants, and means against *Graptodera* [= *Haltica*] *carinata*.

1869. [RILEY, C. V.] Spider and nest. <Amer. Ent., August, 1880, [v. 3], n. s., v. 1, p. 200.

Answer to letter of Mrs. J. B. Harrison; distribution and distinctive characters of *Acrosoma stellatum*.

1870. [RILEY, C. V.] Damage to wheat: Worm boring in the stalk. <Amer. Ent., August, 1880 [v. 3], n. s., v. 1, p. 201.

Answer to letter of A. R. Frost; food-plants and ravages of larva and figure of larva and imago of *Gortyna nitela.*

1871. [RILEY, C. V.] Larvæ from stomach of blue-bird. <Amer. Ent., August, 1880 [v. 3], n. s., v. 1, p. 201.

Answer to letter of S. A. Forbes; larva of *Meracantha contracta* and of *Callimorpha* sp. from stomach of blue-bird; habits and characters of the same.

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Answer to letter of B. F. Cooke; larva of *Thecla* (*pœas?*) feeding on leaves and bolls of cotton-plant; a species of *Microgaster* parasitic in the larva.

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Answer to letter of S. A. Forbes; larvæ of *Agrotis* (*messoria?*) from stomach of robin; *Agrotis cochrani* = *A. messoria.*

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Answer to letter of S. F. Clarke; occurrence in Maryland and Missouri of a luminous larva (*Melanactes* sp.?) [= *Phengodes* sp.]; figures of the larva, of its head and leg enlarged and of its probable parent; occurrence in the more northern States of a similar larva, probably that of *Asaphes memnonius.*

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Answer to letter of J. Monaghan; ravages of larva of *Meromyza americana.*

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Answer to letter of Shelby Reed; habits and ravages of *Parandra brunnea*; *Pimpla* sp. parasitic upon its larva; probable manner in which the eggs of *Odontota rubra* are laid.

1877. [RILEY, C. V.] Army-worm notes and inquiries: Its work on clover. <Amer. Ent., August, 1880 [v. 3], n. s., v. 1, p. 203.

Answer to letter of L. T. Derousse; *Leucania unipuncta* frequently leaves clover-plants untouched while eating the grasses growing with the clover, but under some circumstances destroys young clover-plants.

1878. [RILEY, C. V.] Ichneumon from stomach of bluebird. <Amer. Ent., August, 1880 [v. 3], n. s., v. 1, p. 203.

Answer to letter of S. A. Forbes; *Lampronota* sp. eaten in quantity by bluebirds.

1879. [RILEY, C. V.] Leaf-miner on white oak. <Amer. Ent., August, 1880 [v. 3], n. s., v. 1, p. 203.

Answer to letter of E. W. Claypole; description, habits, and ravages of *Lithocolletis cincinnatiella.*

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Answer to letter of J. G. Dauterive; reference to the most reliable poison and the best machines and methods for applying poison to kill *Aletia argillacea* [=*xylina*].

1883. [RILEY, C. V.] Twice-stabbed lady-bird. <Amer. Ent., August, 1880 [v. 3], n. s., v. 1, p. 204, fig. 109.

Answer to letter of H. N. Patterson; *Coccinellidæ* beneficial by feeding on *Aphididæ* and *Coccidæ*; figure of *Chilocorus bivulnerus*; significance of the presence of this beetle in large numbers on trees.

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Answer to inquiry of C. H. S. Davis; habitats and food-habits of *Chelifer cancroides* and other *Chernetidæ*.

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Answer to letter of S. A. Forbes; bluebirds more destructive to parasitic and predaceous insects than the thrushes; percentage of such food found in the stomachs of the bluebird; larvæ of *Leucania unipuncta, Telephorus bilineatus,* and *Nephelodes violans* eaten by the same; probable hibernation of the first named; habits, hibernation, distribution, and popular name of the *Nephelodes*.

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Advocacy of the use of Paris green and London purple as means against certain insects; danger of the use of the same against many insects; criticism of A. J. Cook's recommendation for their use against *Paria aterrima* and *Carpocapsa pomonella*; limitations within which they may be used.

1888. [RILEY, C. V.] Supplementary instructions to agents of the United States Entomological Commission. <Amer. Ent., September, 1880 [v. 3], n. s., v. 1, p. 218.

Call for experiments to ascertain the minimum quantity of poisons which can be used effectually against *Aletia argillacea* [=*xylina*]; effect of poisons on the several stages of this insect; food-plants, parasites, and enemies of the same; effect of yeast ferment upon it.

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Review of paper by S. H. Scudder; certain forms described as species of *Pezotettix* are dimorphic forms of *Caloptenus*; extract from 8th Ann. Rept. State Ent. Mo., 1876, p. 115.

1890. [RILEY, C. V.] A scale insect on maple hitherto unobserved by American entomologists. <Amer. Ent., September, 1880 [v. 3], n. s., v. 1, pp. 220-221.

Notice of paper by Miss E. A. Smith, with emended reprint of a portion of the same; habits, colors, and behavior of young larvæ and transformations of the male of *Pseudococcus aceris*.

1891. [RILEY, C. V.] How flight in insects is directed. <Amer. Ent., September, 1880 [v. 3], n. s., v. 1, p. 221.

Abstract of paper by Jousset de Bellesme; direction of flight not determined by the motion of the wings, but principally by the displacement of the center of gravity, resulting from the changes of position of other parts of the body.

1892. [RILEY, C. V.] Entomological work at the Department of Agriculture. <Amer. Ent., September, 1880 [v. 3], n. s., v. 1, p. 222.

Notice of the continuation of the appropriations by Congress for field-work and experiments in the entomological division of the U. S. Department of Agriculture.

1893. [RILEY, C. V.] Entomological papers read before the A. A. A. S. <Amer. Ent., September, 1880 [v. 3], n. s., v. 1, p. 223.

Titles of twenty-eight [28] papers read at the Boston meeting.

1894. [RILEY, C. V.] Entomologists at Boston. <Amer. Ent., September, 1880 [v. 3], n. s., v. 1, p. 223.

Notice of the 29th meeting of the A. A. A. S. at Boston, August–September, 1880.

1895. RILEY, C. V. Winged Phylloxera in California. <Amer. Ent., September, 1880 [v. 3], n. s., v. 1, pp. 224-225.

Letter from J. S. Hyde, with remarks; extracts from papers by E. W. Hilgard; winged fertile females of *Phylloxera vastatrix* found in California; local evidence of the spread of this insect; means of eradicating the same.

1896. [RILEY, C. V.] Worm infesting meal sacks. <Amer. Ent., September, 1880 [v. 3], n. s., v. 1, p. 229.

Answer to letter of J. Greenwood, jr.; description of larva and imago of *Ephestia zeæ* [=*interpunctella*]; food-habits of the larva.

1897. [RILEY, C. V.] Hesperid larva feeding on *Canna*. <Amer. Ent., September, 1880 [v. 3], n. s., v. 1, p. 229.

Answer to letter of N. S. Reed; occurrence of *Pamphila ethlius* in Illinois and South Carolina; its larva injurious to *Canna flaccida*.

1898. [RILEY, C. V.] Grape-vine apple-gall. <Amer. Ent., September, 1880 [v. 3], n. s., v. 1, p. 229, fig. 119.

Answer to letter of A. R. McCutchen; occurrence of *Cecidomyia ? vitis-pomum* and of *Calosoma scrutator* in Georgia; figures gall of the first named; food-habits of the *Calosoma*.

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Answer to letter of H. B. May; occurrence and ravages of *Aphis mali ?* in Oregon; means against the same.

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Answer to letter of H. B. Trimble; occurrence of *Phylloxera vastatrix* at West Chester, Pa.; roots of grape-vines destroyed from unknown cause, perhaps by young of *Phyloscia* or *Porcellio*.

1901. RILEY, C. V. New hickory galls made by Phylloxera. <Amer. Ent., September, 1880 [v. 3], n. s., v. 1, p. 230.

Description of *Phylloxera caryæ-scissa* n. sp. and *P. caryæ-avellana* n. sp. from Florida; larva of *Diplosis* found in the galls.

1902. RILEY, C. V. Food-habits of the longicorn beetles or wood-borers. <Amer. Ent., 1880 [v. 3], n. s., v. 1; October, pp. 237–239; November, pp. 270–271.

Food-plants and food-habits of the *Prionidæ* and *Cerambycidæ* of the United States.

1903. [RILEY, C. V.] Additional experiments with Pyrethrum. <Amer. Ent., October, 1880 [v. 3], n. s., v. 1, p. 242.

Details of experiments made by H. G. Hubbard on the effect of very minute quantities of Pyrethrum powder on very young larvæ of *Aletia argillacea* [=*xylina*].

1904. [RILEY, C. V.] A new enemy to the strawberry. <Amer. Ent., October, 1880 [v. 3], n. s., v. 1, pp. 242–243, fig. 121.

Review of paper by A. J. Cook; extracts from the same; description and habits of larva and imago of *Paria aterrima*; means against the imago; habits of larva of *Colaspis flavida*; figure of the same; number of segments and spiracles in larvæ of Coleoptera.

1905. [RILEY, C. V.] A new enemy to corn: The long-horned *Diabrotica*. <Amer. Ent., October, 1880 [v. 3], n. s., v. 1, p. 247.

Notice of recent articles on the ravages of the larva of *Diabrotica longicornis*; food-habits and means against the same; food-habits of *Drasterius amabilis*.

1906. [RILEY, C. V.] Phylloxera congress in Spain. <Amer. Ent., October, 1880 [v. 3], n. s., v. 1, p. 247.

Notice of a congress to be held in Spain to consider all topics connected with the ravages of *Phylloxera vastatrix*.

1907. [Riley, C. V.] The grape Phylloxera not permanently destructive. <Amer. Ent., October, 1880 [v. 3], n. s., v. 1, p. 248.

Recovery of grape-vines formerly injured by *Phylloxera vastatrix* in California and Missouri; belief that in Europe grape-vines will be grown again on the lands of late years ravaged.

1908. [Riley, C. V.] Sale of silk-worm eggs. <Amer. Ent., October, 1880 [v. 3], n. s., v. 1, p. 248.

$6,000,000 worth of silk-worm eggs sent from Japan to France via San Francisco in each of the four years 1874–1877.

1909. [Riley, C. V.] [Death of S. S. Haldeman.] <Amer. Ent., October, 1880 [v. 3], n. s., v. 1, p. 248.

Obituary notice.

1910. [Riley, C. V.] [Retirement of Mr. Fuller.] <Amer. Ent., October, 1880 [v. 3], n. s., v. 1, p. 248.

Announcement of the retirement of A. S. Fuller as assistant editor of the American Entomologist.

1911. [Riley, C. V.] Insect enemies of growing rice. <Amer. Ent., October, 1880 [v. 3], n. s., v. 1, p. 253.

Answer to letters of J. L. Leconte and J. Screven; ravages of and means against the "grub" [=*Chalepus trachypygus*] and the "maggot" [=*Lissorhoptrus simplex*] in rice fields in Georgia.

1912. [Riley, C. V.] Blind-eyed *Smerinthus*. <Amer. Ent., October 1880 [v. 3], n. s., v. 1, p. 254.

Answer to inquiry of Mrs. J. B. Harrison; occurrence at lamp-light in N. H. of *Smerinthus excæcatus*; food-plant of the larva of the same.

1913. [Riley, C. V.] White waxy secretion on stems of bitter-sweet. <Amer. Ent., October, 1880 [v. 3], n. s., v. 1, p. 254.

Answer to inquiry of J. A. Lintner; method of oviposition and characters of egg-mass of *Enchophyllum* [=*Enchenopa*] *binotata*; seasons, habits, and food-plants and description of the eggs of the same.

1914. [Riley, C. V.] Prickly-ash larva: Tachinid eggs. <Amer. Ent., October, 1880 [v. 3], n. s., v. 1, p. 254.

Answer to inquiry of R. W. Jones; larva of *Papilio cresphontes* on prickly ash; eggs of *Tachina* sp. on larva of *Aletia argillacea* [=*xylina*].

1915. [Riley, C. V.] Worms on cabbage: Boll-worm feeding on leaf. <Amer. Ent., October, 1880 [v. 3], n. s., v. 1, p. 254.

Answer to inquiry of R. W. Jones; food-habits of larvæ of *Heliothis armigera* and of *Pionea rimosalis*.

1916. [Riley, C. V.] Buggy peas. <Amer. Ent., October, 1880 [v. 3], n. s., v. 1, p. 254.

Answer to letter of A. Berger; abundance of *Bruchus pisi* in Wisconsin; means against it.

1917. Riley, C. V. Glow-worm. <Amer. Ent., October, 1880 [v. 3], n. s., v. 1, p. 254, fig. 123.

Answer to letter of J. J. Dean; occurrence of larva of *Photuris pennsylvanica* at Chatham, N. J.; figures larva and imago of the same: larva and imago of *Photinus pyralis*, also luminous; males and females of these species winged; female of *Lampyris noctiluca* wingless and more luminous than the male.

1918. [RILEY, C. V.] The use of fungus growths to destroy insects. <Amer. Ent., November, 1880 [v. 3], n. s., v. 1, pp. 269–270.

Abstract of paper by A. N. Prentiss; the constant presence of spores of fungi in the air vitiates the value of most experiments on the application of the fungi to insects; insects rarely affected by the spores which are in the air while the plants are more so affected; yeast more injurious mechanically than infectiously.

1919. [RILEY, C. V.] New species of scale insects. <Amer. Ent., November, 1880 [v. 3], n. s., v. 1, pp. 275–276.

Review of paper by W. H. Ashmead on the red scale.

1920. [RILEY, C. V.] Remedy for cabbage worms. <Amer. Ent., November, 1880 [v. 3], n. s., v. 1, p. 276.

Pyrethrum powder the most satisfactory means against all larvæ affecting the leaves of cabbage.

1921. [RILEY, C. V.] Pyrethrum for the screw-worm. <Amer. Ent., November, 1880 [v. 3], n. s., v. 1, p. 276.

Notice of paper by A. R. Kirkpatrick; directions for the use of pyrethrum powder against the "screw-worm" [=*Lucilia macellaria*]; objections to the use of other remedies.

1922. [RILEY, C. V.] Oviposition in the *Tortricidæ*. <Amer. Ent. November, 1880 [v. 3], n. s., v. 1, p. 276.

Notice of and extract from paper by C. H. Fernald.

1923. [RILEY, C. V.] About *Phora* being merely a scavenger and not a true parasite. <Amer. Ent., November, 1880 [v. 3], n. s., v. 1, p. 277.

Letter from C. R. Osten Sacken, with remarks; *Phora aletiæ* not a parasite; oviposition and habits of larva of the same.

1924. [RILEY, C. V.] Gall on Solidago leaves. <Amer. Ent., November, 1880 [v. 3], n. s., v. 1, p. 278.

Answer to letter of H. Barnes; occurrence of galls of *Cecidomyia carbonifera* on leaves of *Solidago nemoralis* ? at Mulberry Corners, Ohio.

1925. [RILEY, C. V.] Oak gall: *Cynips q.-decidua* Bass. <Amer. Ent., November, 1880 [v. 3], n. s., v. 1, p. 278.

Answer to letter of J. Schenck; galls of *Cynips q. decidua* ? found on leaves of *Quercus muhlenbergii* at Mount Carmel, Ill.

1926. [RILEY, C. V.] Insects from stomach of lark, robin, and sunfish. <Amer. Ent., November, 1880 [v. 3], n. s., v. 1, p. 278.

Answer to letter of S. A. Forbes; *Diplotaxis sordida* from stomach of meadow-lark; egg of a reduviid from that of a robin; larva of an ephemerid (*Polymitarcys alba* ?) from the stomach of a sunfish.

1927. [RILEY, C. V.] Supposed hibernating *Aletia* chrysalis. <Amer. Ent., November, 1880 [v. 3], n. s., v. 1, p. 278.

Answer to letter of J. W. Davidson; pupa resembling that of *Achatodes zeæ* found in stalk of maize at Uniontown, Ala.

1928. RILEY, C. V. On the natural history of certain bee-flies (*Bombyliidæ*). <Amer. Ent., December, 1880 [v. 3], n. s., v. 1, pp.

1928. Riley, C. V.—Continued.
279–283, figs. 147–151. Review: <Ent. Mo. Mag., February, 1881, v. 17, pp. 206–207.

Advance print of pp. 262–267 and a general abstract of pp. 267–269 of the section entitled "Bee-fly larvæ, family *Bombyliidæ*," in 2d Rept. U. S. Entomological Commission. See No. 1959 for synopsis of contents.

1929. Riley, C. V. On a new pyralid infesting the seed-pods of the trumpet-vine. <Amer. Ent., December, 1880 [v. 3], n. s., v. 1, pp. 286–288, figs. 152–153.

Description, with figures, of *Clydonopteron* n. g. [p. 287] and of larva, pupa, and imago of *C. tecomæ* n. sp. [p. 288], and of the abode of this insect in pods of the trumpet-vine; habits of the insect.

1930. [Riley, C. V.] Experiments with yeast-ferment on various insects. <Amer. Ent., December, 1880 [v. 3], n. s., v. 1, pp. 289, 290.

Reports by J. E. Willet and A. J. Cook upon their experiments in the application of beer and yeast to various insects; no infection communicated to the insects by these applications.

1931. Riley, C. V. Notes on the imported elm leaf-beetle. <Amer. Ent., December, 1880 [v. 3], n. s., v. 1, pp. 291–292.

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TABLE OF CONTENTS.

Letter of transmittal IX
Preface XIII

Chapter I: By A. S. Packard and C. V. Riley.

Additions to the chronology of locust ravages 1

The locust in 1878 in Minnesota and Iowa, 1; in Nebraska, Texas, and Indian Territory, 2; in Kansas, 2–3; in Dakota, 3–4; in Colorado, 4; in Wyoming, 4–5; in Utah and Idaho, 5–7; in eastern Oregon and Nevada, 7; in Montana, 7–9—Summary, 9—The locust in 1879 in Nebraska, Washington Territory, Dakota, and Texas, 10; in Colorado, 10–11; in Wyoming, 11–12; in Utah, 12–13; in Montana, 13–14.

Chapter II: By C. Thomas.

The relation of the locust and its ravages to agriculture and the settlement of the Territories 14

Character of the permanent region, 15—Importance of subduing the locusts in the permanent region, 15–16—Difficulties of burning over, 16–18—Extermination impossible, but subjection possible, 19–20—Settlement of the permanent region the best remedy, 19–20—Source of the more destructive swarms, 20—Railroad needed in the permanent region, 21—Agricultural, not pastoral, population wanted, 22—Difficulties of constructing railroads in the permanent region, 22—Climatic character of the permanent region, 23—Disturbing and fighting the locusts in the permanent region, 24–25—Other proposed plans, 25—Plowing not feasible, 25–26—The locust question solved in the temporary region, 26—New definition of the temporary region, 27–28—The locust problem a national one, 29–31.

1959. [Riley, C. V.]—Continued.

Chapter III: By C. Thomas.

Facts concerning and laws governing the migrations of locusts in all countries 31

Most species of *Acrididæ* not migratory, 31—Migratory disposition not caused by anatomical differences, 31–32—Writers on locust flights, 32–33—Earliest accounts of locust flights in Europe, 33–34—Locust flights in Europe in the middle ages, 34–37; in the seventeenth century, 37–38—The locust invasion of 1693 in Europe, 38–39—Locust flights in Europe in the eighteenth and nineteenth centuries, 40–41—Locusts in Asia and adjacent islands, 41; in Cyprus, 42; in Arabia and Syria, 43–44; in Persia, 44; in the Steppes, 45; in China, 46; in Manila, 46; in India, 46–47; in Australia, 47; in New Zealand, 47—Locust flights in Africa, 48; in northern Africa, 48–49; in Egypt, 49—in Algiers, 50–51; in Abyssinia, 51; in central Africa, 51; in eastern Africa and the Canary Islands, 52–53—Locusts in South America, 53–54—Prevalence of locusts in deserts and dry regions, 54–55—Locust flights not governed by laws of periodicity, 55–56—Permanent breeding grounds of locusts, 56–57—Their geographical distribution, 58—*Caloptenus spretus* not in Mexico, 58—Migratory locusts in Yucatan and the West Indies, 58–59—In Nicaragua, 59—Geographical limits of *Caloptenus spretus*, 59; of *Pachytylus migratorius*, 59–60—Difficulty of determining species, 60–61—Definition of permanent home of migratory locusts, 62—Range of *Pachytylus migratorius*, 62–63; of *Acridium peregrinum*, 63–64—Comparison with the laws of geographical zoölogy, 65–66—Meeting point of three sub-regions, 67—Each species has its permanent breeding ground, 68—General character of the permanent breeding grounds, 68–69—Breeding ground of *Caloptenus italicus*, 69; of *Pachytylus migratorius*, 69–70; of *Acridium peregrinum*, 70; of *Caloptenus spretus*, 70–71.

Chapter IV: By C. Thomas.

Habits and characteristics of locusts in all countries within their areas of permanent distribution, so far as these relate to their movements 72

Caloptenus spretus always migratory, 72–73—Flights of C. *spretus*, 73–74—Invading swarms come from northwest, 74–75—Other opinions eliminated, 75–76—Swarms in 1875 and 1876, 76–77—Direction of returning swarms of *C. spretus*, 78; of other migratory locusts, 78–79—Direction of local flights, 79–81—Returning swarms do little injury, 81–82—Distance to which swarms may migrate, 82–84—Length of a single flight, 84–85—Swarms able to cross large bodies of water, 85–86—Swarms carried far by winds, 86–87—The mode of flight, 87—Position of the locust while flying, 87–88—Locusts flying with the wind, 88–89—Method of falling of swarms, 89—Formation of swarms, 89–91—Movements of swarms of *C. spretus*, as reported by Dr. Child, 91–93—Other reports, 94—Movements of swarms in other countries, 95–96—Swarms usually alight at night, 96–97—The height at which swarms move, 98–100—Different directions of swarms at the same time and place, 100—Fall of locusts into the sea, 100–102—Great flying power of locusts, 102—General causes of migration, 103—Excessive numbers, 103–104—Want of food, 104—Excessive heat,

1959. [RILEY, C. V.]—Continued.

CHAPTER IV—Continued.

105—Dry condition of the atmosphere, 105–106—Arid condition of the mountain region, 106–107—Immediate causes of migration, 107–108.

CHAPTER V: By C. Thamas.

Influence of meteorological conditions on the development and migrations of locusts 109

Influence of heat and dryness, 109–110—Packard's table of locust years, 111–112—Table of rain-falls for 1860 to 1866, 112—Influence of the rainfall, especially in 1864, 112–113—Average monthly temperature for 1864 and 1866, 113–115—Rain-fall of the years 1863 to 1867, 116—Temperature of the years 1863 to 1867, 117—Extreme variations of monthly mean temperature from 1863 to 1867, 118–119—Monthly and annual mean temperature from 1872 to 1876, 119–121—Monthly and annual rain-fall from 1872 to 1878, 122–124—Extreme fluctuations between monthly mean temperature, 125–126—Greatest variations between monthly mean temperatures, 126—Variations of temperature between months of consecutive years, 127–128—Daily temperature at Fort Sully from 1872 to 1875, 129–134—Relation of temperature to the development of the eggs, 135–136—Professor Riley's experiments, 137—Professor Abbe's theory on the subject discussed, 137–140—Table showing temperature and direction and velocity of wind at Western stations, 141–154—Relation of temperature and winds to locust flights, 155.

CHAPTER VI: By A. S. Packard.

The southern limits of the distribution of the Rocky Mountain locust. 156

Few locusts permanently breeding in New Mexico and none in Arizona, 156—*Caloptenus spretus* probably not in southern New Mexico, central and southern Arizona, etc., 156—History of locust invasions in New Mexico from 1864 to 1879, 157–159—Southern range of the locust in Mew Mexico, 159—Changes in the map in the Report I, showing the distribution of the locust, 159–160.

CHAPTER VII: By A. S. Packard.

Summary of locust flights from 1877 to 1879 160

General remarks on maps Nos. 2 to 4, 160–161—Flights of locusts in 1878, 161–162—Flights in 1879, 162–163.

CHAPTER VIII: By A. S. Packard.

The western cricket 163

Difference in habits between the western cricket and the locust, 163—Occurrence of *Anabrus purpurascens*, 163–164; of *A. simplex*, 164—Mode of egg-laying, 164—Movements of an army of the western cricket, 164–165—Its ravages, 165–166—Its food, 166—Its enemies and parasites, 166—Its breeding habits, 166–167—Remedies, 167–168—Geographical distribution of the species of *Anabrus*, 168–169—Synopsis of the species of *Anabrus* and its allies, 169–170—External anatomy of *Anabrus*, 170; the head, 170–172; the thorax, 172–174; the abdomen, 174–175—Internal anatomy of *Anabrus purpurascens*, 175; the digestive system, 175 176; the nervous system, 176–177; the breathing apparatus, 177–178.

CHAPTER IX: By A. S. Packard.

The air-sacs of locusts with reference to their powers of flight 178

History of the study of the air-sacs, 178—Air-sacs in different insects, 178–179—The air-sacs of the *Acridii*, 179—Use of the air-sacs in flight, 179–182—Their origin, 182–183.

1959. [RILEY, C. V.]—Continued.

CHAPTER X: By C. S. Minot.

Histology of the locust (*Caloptenus*) and the cricket (*Anabrus*) 183

Study of histology of insects, 183–184—Explanations of Figs. 1 and 2, Plate II, 185–186—The cuticula, 186–188—The epidermis, 188–189—Sense organs, 189—Nervous system, 190—Tracheæ, 191–195—Air-sacs and spiracles, 195—Muscles, 195–196—Organs of circulation, 196—Connective tissue, 196–198—Ovary, 198–201—Anterior cæcum of the oviduct, 201—Uterus of locusts, 201–203—Male organs, 203—Testis, 203–204—Development of the spermatozoa, 204, 207—*Vasa deferentia*, 207—*Ductus ejaculatorius*, 207—*Vesiculæ seminales*, 207–208—Digestive canal, 208–210—Crop, 210–211—Proventriculus, 211–212—Stomach, 212–214—Diverticula, 214–215—Gastro-ileal folds, 215–217—Ileum, 217—Colon, 217–218—Rectum, 218–219—Summary on the digestive canal, 219–221—Malpighian vessels, 222.

CHAPTER XI: By A. S. Packard.

The brain of the locust 223

The nervous system in general, 223–224—The brain of insects compared with that of vertebrates, 224–226—The brain of the adult locust, 226—Histological elements of the brain, 226–228—The sections of the brain, 228–230—Internal topography of the brain, 230—The central body, 230, 231—The mushroom bodies, 231–234—The optic lobes, 234—The optic ganglion, 234—The antennal or olfactory lobes, 235—The commissural lobes, 235—The brain of locusts compared with that of other insects, 235–236—Structure of the brain in the embryo locust, 236—The brain of the embryo locust compared with the first thoracic ganglion, 238—The brain in the second embryonic stage, 238–239—Structure of the subœsophageal ganglion, 239—The brain of the freshly-hatched larva of *Caloptenus spretus*, 239; of the third larval stage of *C. bivittatus*, 239; of the second or last pupal stage of *C. spretus*, 240–241—Bibliography of the internal structure of the brain of crustacea and insects, 241–242.

CHAPTER XII: By C. V. Riley and C. Thomas.

Locust ravages in California 242

Position of the genus *Camnula* in the *Œdipodini*, 242–243—Description of the genus *Camnula*, 243; of *Œdipoda pellucida*, 243; of *Œdipoda atrox*, 243–244; of *Camnula pellucida*, 244–246—The locust in California in 1878, 246; in Sierra Valley, 247; in the vicinity of Loyalton, 247–248; of Sierraville, 249—History of locust devastation in California, 250—Enemies of the Californian locust, 251—Protective measures, 251–252—Life history of *Camnula atrox*, 252–253—The red or locust mite, 253—Damage done by the locust in Sierra Valley, 254–255—The locust in California in 1879, 255–257—Description of *Œdipoda obliterata*, 257–259—Remarks on *Cratypedes Putnami*, 259.

CHAPTER XIII: By C. V. Riley.

Further facts about the natural enemies of the locust 259

Blister-beetle larvæ feeding on the eggs of the Californian locust, 259–260—Retardation in the development of blister-beetles, as shown in *Epicauta vittata*, 260—Philosophy of such retardation, 260–261—Eggs of *Chauliognathus pennsylvanious*, 261—Habits of the young larva, 261–262—Egg-laying of asilid-flies, and particularly of *Mallophora orcina*, 262—Bee-fly larvæ common among the

1959. [RILEY, C. V.]—Continued.

CHAPTER XIII—Continued.

eggs of *Camnula pellucida*, 263—Habits of bee-fly larvæ, 263-264—Observations on the larval habits of *Bombylii*, 264-265—Larval habits of *Argyramœba*, 265-266—Abundance of bee-flies and blister-beetles in the Western country, connected with the abundance of locusts, 266—Life history of *Systœchus oreas*, 266-267—Description of its larva, 267; of the pupa, 267-268; of the imago, 268—Description of *Systœchus oreas*, 268—Larva of *Triodites mus*, 268-269—Imago of *Triodites mus*, 269—Dr. T. A. Chapman's observations on *Bombylius major*, 269—Hair-worms and red-mites abundant upon locusts in California, 270—Chalcid-fly parasitic on locusts, 270—Synonymy of the locust-egg parasite, 270—Digger-wasps killing locusts, 270.

CHAPTER XIV: By C. V. Riley.

Courses that may be adopted by the General Government to lessen locust injury.. 271

Importance of destroying the locusts in their native breeding-grounds, 271—Recapitulation of means suggested in first report, 271—Importation of English rooks, 271—Importance of burning over the permanent breeding-grounds, 272—Breeding-grounds occupy comparatively small areas in the permanent region, 273—Protection from invading swarms, 273—Locust warnings through the Signal Bureau, 273—Diverting swarms by means of smoke, 274—Co-operation of governments and governmental institutions, 274—Apathy apt to result from periods of immunity from locust invasions, 274—How the Government can aid, 275—Surface characteristics of the permanent region and the proportion of burnable land, 275—Number of square miles in the permanent region, 276—The plains area east of the mountains, 276—Its vegetation, 276—Burnable land practically indentical with grazing-land, 277—The plains area in the British possessions, 278—In the United States, 279—The mountain area, 280—Timber-lands in the mountain area dependent upon latitude and altitude, 280—Northern section of the mountain area, 280, 281—River valleys in Montana, 281—Valley of the Yellowstone and its tributaries, 281—Of the Madison River, 282—Of the Jefferson and Missouri Rivers, 283—The Wind River and the Bighorn Mountains, 283—The Green River Basin, 283—Valley of the Snake River and its tributaries, 286, 289—Southern section of the mountain area, 289—In southern Wyoming, 290-291—In Colorado, 291—The San Luis Valley, 292—Mountain area in New Mexico, 292—The plateau area, 293—Its extent, 293—The Roan Plateau, 293—The Uinta Valley, 293—The Grand River Valley, 294—The Great Sage Plain, 294—The San Juan River Valley, 295—The Colorado River Plateau, 295—The Great Basin area and the Wasatch Mountains, 296—Valleys of the Bear River and its tributaries, 296—The Wasatch Range and its valleys, 298—Mountain Ranges in Nevada, 299-300—The Mojave Desert, 300—Preventive measures in the plains region, 300—*Caloptenus spretus* breeds, especially in British America and Montana, 300—Fertile grass-land in the Territories, 300—Its extent, 302—Encouragement to settlement, 302—Modification of climate by settlement and cultivation, 302—Professor Thomas' communication to Governor Pillsbury, 303—The settlement of Dakota will benefit Minnesota, 304—Forest planting

1959. [Riley, C. V.]—Continued.

Chapter XIV—Continued.

on the coteau of the prairies, 305—Preserving of lakes, ponds, and swamps in Minnesota, 306—Encouragements to railroads, 307—Irrigation, 307—Extent of the arid region, 307–308—Only a small portion of the land irrigable, 308—Agriculture in the arid West and in the Mississippi Delta require assistance of the National Government ,308—Prevention of floods by means of reservoirs, 309—Cost of irrigation, 310—Influence of irrigation on the locust question, 310—Mr. H. Gannett's report on irrigation in the arid region, 310—Waste of water in irrigating, 311—Amount of irrigable land, 311—Amount of water necessary for irrigation, 312–313—Irrigable land in Colorado, Utah, California, &c., 313—Arable land in the Territories, 314—Amount of land in actual cultivation, 314—Irrigation by means of artesian wells, 315—Methods of irrigation, 315–316—Uselessness of reservoirs and great irrigating canals in the arid region, 316—How irrigation should be regulated, 316—Preservation of forests; tree-planting, 317—Judicious burning in spring, 317—Permanent establishment of locust signals and warnings, 318—Co-operation with the Dominion Government, 319—Preventive measures in the mountain and plateau areas, 319—Breeding-grounds of the locust in the mountain area, 319—Influence of settlement, 320—Replanting of forests, 320—Importance of locust signals to the farmer in Colorado and Utah, 321—Very destructive locust invasions not likely to recur in the future, 321—The locust has ceased to be an object of dread, 322.

Appendix I:

Miscellaneous data and replies to Circular No. 1 .... [3]

Circular No. 1, [3]—Nebraska data, [4]—Data for Minnesota, [17]—Data for Iowa, [20]—Data for Dakota, [21].

Appendix II: By S. H. Scudder.

List of the Orthoptera collected by Dr. A. S. Packard, jr., in the western United States in the summer of 1877 .... [23]

Bradynotes opimus, Scudd., n. sp., [24]—*Pezotettix pacificus*, Scudd., n. sp., [24]—*Gomphocerus shastanus*, Scudd., n. sp., [25]—*Circotettix maculatus*, Scudd., n. sp., [26]—*Trimerotropis latifasciata*, Scudd., n. sp., [26]—*T. similis*, Scudd., n. sp., [27]—*T. cæruleipes*, Scudd., n. sp., [27]—*Psinidia wallula*, Scudd., n. sp., [27].

Appendix III:

Report of John Marten .... [29]

Observations of John Marten, special agent, on locusts in Iowa, [29]—In Minnesota, [30]—In Dakota, [30]—In Nebraska, [31].

Appendix IV: By B. P. Mann and C. Thomas.

Bibliography of some of the literature concerning destructive locusts .... [33]

Introductory and explanatory remarks, [33]—Bibliography on the destructive locusts of Europe, Asia, and Africa, [33]—Supplementary list to the bibliography on locusts in foreign countries, [50]—Additions to bibliography on the locusts in America, [55].

Appendix V:

Data concerning locust in Texas .... [57]

Notes furnished by Gen. A. J. Myer, U. S. A., Chief Signal Officer, on locusts in Texas, chiefly in the year 1877, [57]—Locust data from Indian Territory in 1877, [61].

1959. [RILEY, C. V.]—Continued.

APPENDIX VI:

On the flight of locusts .... [63]

Translation, by F. P. Spofford, of a memoir by Gaetano de Lucretus, [63]—Translation of d'Azara's paper on locust invasions in Spain from 1754 to 1757, by F. P. Spofford, [66].

APPENDIX VII:

Notes of a journey made to Utah and Idaho in the summer of 1878, by A. S. Packard, jr .... [69]

Observations on locusts in Nebraska and Colorado, [69]—In Wyoming, [69]—In Utah, [69]—In Idaho, [70]—Observations on the journey returning East, [71].

APPENDIX VIII:

Yersin's researches on the functions of the nervous system of the articulate animals .... [73]

Translation, by Dr. A. S. Packard, jr., of Saussure's abstract from Yersin's Recherches sur les fonctions du système nerveux dans les animaux articulés, [73].

1960. RILEY, C. V. Notes on North American Microgasters, with descriptions of new species. <Trans. Acad. Sci. St. Louis, 16 April 1881, v. 4, pp. 295–315, 9 figs. Separate: <[St. Louis, Mo.], 6 April, 1881, 20 pp., 9 figs.

Characteristics and habits of the *Microgasters*; description of larva of *Apanteles aletiæ*; the cocoons and their construction; effect of the parasites upon the longevity of the host; secondary parasites; habits and descriptions of several new species and varieties, for a list of which see the *Systematic Index*; figures *A. aletiæ*, healthy and parasitized larvæ of *Chœrocampa pampinatrix* [=*Ampelophaga myron*]; also mass of *Microgaster* cocoons, and the formation of the cocoon by the larva.

1961. [RILEY, C. V.] Exuviation in flight. <Amer. Nat., May [16 April], 1881, v. 15, p. 395.

Criticism of R. McLachlan's observations; process of casting subimaginal skin in *Polymitarcys alba*.

1962. RILEY, C. V. The rascal leaf-crumpler in Georgia. <Amer. Nat., May [16 April], 1881, v. 15, p. 400.

Occurrence and ravages of *Acrobasis nebulo* [=*indiginella*] in Bryan County, Georgia.

1963. [RILEY, C. V.] Vertical *vs.* horizontal insect boxes. <Amer. Nat., May [16 April], 1881, v. 15, p. 401.

Review of pamphlet by A. Preudhomme de Borre; reply of G. H. Horn to Preudhomme de Borre.

1964. [RILEY, C. V.] Insects affecting the China tree. <Amer. Nat., May [16 April], 1881, v. 15, pp. 401–402.

General immunity of the China tree from the attacks of insects and its consequent value as a shade tree; occurrence of a *Lecanium* and *Ceroplastes* n. sp. upon it in Alabama; injuries to its leaves by *Atta fervens* in Texas.

1965. [RILEY, C. V.] Galls on *Eucalyptus*. <Amer. Nat., May [16 April], 1881, v. 15, p. 402.

Critical review of paper by R. McLachlan; the supposed dipterous galls probably cecidomyidous; the supposed lepidopterous galls probably not lepidopterous, but inhabited by a lepidopterous inquiline.

1966. [RILEY, C. V.] North American *Anthomyidæ*. <Amer. Nat., May [16 April], 1881, v. 15, p. 402.

Notice and summary of paper by H. A. Hagen.

1967. [RILEY, C. V.] Galls and gall-insects. <Amer. Nat., May [16 April], 1881, v. 15, pp. 402–403.

Review of paper by H. F. Bassett, with additional notes on the gall of *Cynips* [=*Andricus*] *quercus-californica* found on *Quercus douglasii* and infested by *Ozognathus cornutus;* the *Cynips* produced from this gall all females; earlier accounts of the gall and of the habits of *O. cornutus.*

1968. RILEY, C. V. Scale insect on raspberry. <Farmer's Review, 21 April, 1881, v. 6, p. 243. S.-b. No. 23, p. 150. Reprint: <Amer. Nat., June [19 May], 1881, v. 15, p. 487.

Remarks on communication from R. B. Fulton; occurrence and ravages of a scale (*Diaspis harrisii?*) [=*Chionaspis furfurus*] on black-cap raspberry in Mississippi; mode of dissemination and means of extermination of *Coccidæ.*

1969. RILEY, C. V. Descriptions of some new *Tortricidæ*, leaf-rollers. <Trans. Acad. Sci. St. Louis, May, 1882, v. 4, pp. 316–324. Separate: <[St. Louis, Mo.], 28 April, 1881, 9 pp.

Description of two (2) new genera and thirteen (13) new species of *Tortricidæ*; see the *Systematic Index* for a list of the same; mention of the food-plants of some of the species.

1970. RILEY, C. V. Larval habits of bee-flies. <Amer. Nat., June [19 May], 1881, v. 15, pp. 438–447, pl. 6. Separate: <pp. 438–447.

Adapted from the 2d Rept. U. S. Ent. Commission, pp. 262–269; see No. 1959 for synopsis of contents.

1971. [RILEY, C. V.] The periodical Cicada alias "seventeen-year locust." <Amer. Nat., June [19 May], 1881, v. 15, pp. 479–482, fig. 1. Correction: <*Ibid.*, July [22 June], 1881, p. 578.

Extract from 1st Rept. State Ent. Mo., with additional notes; figures eggs, pupæ, and imago of *Cicada* [=*Tibicen*] *septendecim*, and of twig punctured by the imago for the deposition of her eggs.

1972. RILEY, C. V. A new species of oak coccid mistaken for a gall. <Amer. Nat., June [19 May], 1881, v. 15, p. 482.

Description of *Kermes galliformis* n. sp. [p. 482] occurring on *Quercus palustris* in the southern and central United States; the coccid infested by *Euclemensia bassettella.*

1973. [RILEY, C. V.] The "water-weevil" of the rice-plant. <Amer. Nat., June [19 May], 1881, v. 15, pp. 482–483. Extract: <Ann. Rept. [U. S.] Commissioner Agric. for 1881 and 1882, pp. 130–133.

Note on the injury done to rice plants by the larvæ of *Chalepus trachypygus* and by other larvæ, probably *Lissorhoptrus simplex*; letter from J. Screven; seasons, habits, and ravages of the last-mentioned species.

1974. [RILEY, C. V.] The impregnated egg of *Phylloxera vastatrix.* <Amer. Nat., June [19 May], 1881, v. 15, pp. 483, 484. Reprint: <Amer. Wine and Grape Grower, 1 July, 1881, v. 3, p. 104. S.-b. No. 42, pp. 12–13.

Verification by P. Graell of author's conclusion that the impregnated egg of *Phylloxera vastatrix* would generally be found to hatch in the same season in which it was laid.

1975. RILEY, C. V. Works on North American Microlepidoptera. <Amer. Nat., June [19 May], 1881, v. 15, pp. 484–486.

Review of works of T. de Grey [Lord Walsingham]; discussion of new genera; list of *Tortricidæ* of economic interest common to Europe and North America; additions to the synonomy of *Tortricidæ*.

1976. [RILEY, C. V.] Moths mistaken for *Aletia*. <Amer. Nat., June [19 May], 1881, v. 15, pp. 486–487.

Platyhypena [=*Hypena*] *scabra* and *Phoberia atomaris* mistaken for *Aletia argillacea* [=*xylina*]; hibernating habits of the first species.

1977. [RILEY, C. V.] Specific value of *Apatura alicia* Edw. <Amer. Nat., June [19 May], 1881, v. 15, p. 487.

Critical review of paper by W. H. Edwards.

1978. RILEY, C. V. *Antigaster* vs. *Eupelmus*. <Ca. Ent., May, 1881, v. 13, p. 114.

Validity of L. O. Howard's reasons for considering *Antigaster* a synonym of *Eupelmus*.

1979. RILEY, C.V. The periodical Cicada alias "seventeen-year locust." <Farmer's Review, 16 June, 1881, v. 6, p. 370. S.-b. No. 42, pp. 18–20.

Extract from 1st Rept. State Ent. Mo., with additional notes and request for further information in regard to the chronology and geographical distribution of the broods of *Cicada* [=*Tibicen*] *septendecim* and *C.* [=*T.*] *tredecim* which appear in 1881.

1980. [RILEY, C. V.] Dimorphism in *Cynipidæ*. <Amer. Nat., July [22 June], 1881, v. 15, p. 566.

Claim of author to have made the first record at least in North America of proof of dimorphism in *Cynipidæ*; notice of writings of B. D. Walsh, H. F. Bassett, and H. Adler on the subject; list of species of *Cynipidæ* in which the occurrence of dimorphic forms has been proven, and of closely allied species in which no alternate generation seems to occur.

1981. [RILEY, C. V.] *Blepharoceridæ*. <Amer. Nat., July [22 June], 1881, v. 15, pp. 567–568.

Account of various investigations into the natural history of *Blepharoceridæ*; description of larvæ and pupæ of these flies.

1982. [RILEY, C. V.] *Braula cæca* not particularly injurious to the honey-bee. <Amer Nat., July [22 June], 1881, v. 15, p. 568.

Notice of paper of J. Fedarb; ravages of *Braula cæca* in hives generally overestimated at present and formerly unknown.

1983. [RILEY, C. V.] Economic entomology in England. <Amer. Nat., July [22 June], 1881, v. 15, p. 568.

Notice of Miss E. A. Ormerod's report for 1880.

1984. [RILEY, C. V.] The cultivation of pyrethrum and manufacture of the powder. <Amer. Nat., 1881, v. 15, July [22 June], pp. 569–572; September [23 August], pp, 744–746; October [23 September], pp. 817–819. See: <Amer. Wine and Grape Grower, December, 1881, v. 4, p. 22. S.-b. No. 51, p. 149.

Partial history of the use of pyrethrum powder as an insecticide; directions for the cultivation of the plants and for the production and use of the powder

1985. [RILEY, C. V.] Hudson Bay Lepidoptera. <Amer. Nat., July [22 June], 1881, v. 15, pp. 572, 573.

Review of paper of J. J. Weir; reprint of the list of Lepidoptera and of the remarks on the explanation of the relations of the fauna of Hudson's Bay to that of Europe; probability that the species identical with those of Europe are recent immigrants.

1986. [RILEY, C. V.] Trade in insects. <Amer. Nat., July [22 June], 1881, v. 15, p. 573.

General decline in prices of insects within sixty years or more; statement of some prices obtained for Coleoptera recently.

1987. [RILEY, C. V.] Ants injurious in Arizona. <Amer. Nat., July [22 June], 1881, v. 15, pp. 573, 574.

Statement by H. H. Rusby of ravages of *Formicidæ*, which occur in vast colonies.

1988. [RILEY, C. V.] Covering of egg-puncture mistaken for *Dorthesia*. <Amer. Nat., July [22 June], 1881, v. 15, p. 574.

Waxy material covering the egg-punctures of *Enchophyllum* [=*Enchenopa*] *binotata*, labeled *Dorthesia viburni* and *D. celastri* in collection of A. Fitch.

1989. [RILEY, C. V.] [*Dolerus unicolor.*] <Amer. Nat., July [22 June], 1881, v. 15, p. 574.

Doubts the statement of H. Keenan that the imagos of *Dolerus unicolor* injure the fruit buds of pear-trees.

1990. [RILEY, C. V.] Supposed army-worm in New York and other Eastern States. <Amer. Nat., July [22 June], 1881, v. 15, pp. 574–577.

Ravages of *Nephelodes violans* and *Crambus vulgivagellus* in New Jersey, Long Island, and northern New York; natural history, vernacular names, and description of the larva of the former species; previous accounts of this larva.

1991. [RILEY, C. V.] Migration of butterflies. <Amer. Nat., July [22 June], 1881, v. 15, p. 577.

Report by J. H. Mellichamp of the eastward flight of thousands of *Pieris monuste* in small groups of two, three, or more individuals, on 1 and 2 June, 1881, over Bluffton, S. C.; description of larva and pupa; food-plants of larva.

1992. [RILEY, C. V.] Classification of the mites. <Amer. Nat., July [22 June], 1881, v. 15, pp. 577–578.

Abstract of letter of G. Haller; observations on the appendages and systematic position of the *Acarina*.

1993. [RILEY, C. V.] Carrying out the law. <Amer. Nat., July [22 June], 1881, v. 15, p. 578.

A fine of £5 imposed upon a man in England for importing living *Doryphora decemlineata* into that country.

1994. RILEY, C. V. Locusts and locusts. <N. Y. Tribune, 22 June, 1881. S.-b. No. 32, pp. 55–56; No. 42, pp. 7–11.

Cicada [= *Tibicen*] *septendecim* and *C.* [*T.*] *tredecim* compared with *Caloptenus spretus* to explain and correct the confusion of the species by those who call them all "locusts"; differences in the habits and characters of these

1994. RILEY, C. V.—Continued.

insects, their periodicity and distribution; no fear that *C. spretus* will commit great ravages this year; recommendation of a system of observations and warnings by the United States Signal Service to guard against unexpected inroads of *C. spretus*.

1995. RILEY, C. V. The caterpillar nuisance. <Evening Star [Washington, D. C.], 24 June, 1881, v. 57, No. 8802, p. 3. S.-b. No. 23, p. 152; No. 42, p. 13. Reprint: <Amer. Nat., September [23 August], 1881, v. 15, pp. 747–748, 1 fig.

Natural history of *Hyphantria textor* [=*cunea*]; means against it; methods of applying poisoned liquids to trees.

1996. RILEY, C. V. Directions for cultivating pyrethrum for insect powder. <Gardener's Mo. and Hortic., June, 1881, v. 23, pp. 172–173. S.-b. No. 23, p. 153.

Directions for raising *Pyrethrum cinerariæfolium* from seed; climate not favorable to the growth of *P roseum*; preparation of these plants for the destruction of insects.

1997. RILEY, C. V. Cotton-worms and Cicadas. Prof. Stelle's logic! <Selma [Ala.] Times, 19 July, 1881. S.-b. No. 24, pp. 44–45; No. 39, p. 123.

Criticism of statements of J. P. Stelle; impossibility of exterminating *Aletia xylina*; waves of destructiveness; *Cicada* [=*Tibicen*] *tredecim* abundant in sections of Alabama, as predicted.

1998. RILEY, C. V. The Rocky Mountain locust alias Western grasshopper. <Amer. Agric., July, 1881, v. 40, pp. 283–284, 6 figs. S.-b. No. 23, p. 142.

Summary of facts concerning the egg-laying development, habits, food-plants, destructive powers, migration, flight, and enemies of and means against *Caloptenus spretus*; figures of the eggs of the insect in all stages, of the manner of oviposition, and of pans for the destruction of the locusts; prospects of future injury.

1999. RILEY, C. V. Lepidopterological notes. <Papilio, July, 1881, v. 1, pp. 106–110.

Advance print of extracts from Bull. No. 6, U. S. Entomological Commission, pp. 56–58, 78, 82–83. See No. 2026 for synopsis of contents.

2000. RILEY, C. V. Further notes on the pollination of Yucca and on *Pronuba* and *Prodoxus*. <Proc. Amer. Assoc. Adv. Sci. for 1880, 14 October, 1881, v. 29, pp. 617–639, 16 figs. Separate: <[Salem, Mass, July, 1881], 23 pp., 16 figs.

Recapitulation of published observations on *Pronuba yuccasella* and *Prodoxus decipiens*, with additional observations and references to literature; habits and functions of the two species; descriptions and figures of the generic characters of *Pronuba*, *Prodoxus*, and *Hyponomeuta*, and of the specific characters of *Pronuba yuccasella*, *P. maculata* n. sp., *Prodoxus decipiens*, *P. intermedius* n. sp., *P. marginatus* n. sp., *P. cinereus* n. sp., *P. ænescens* n. sp., *Hyponomeuta malinella*, and *H. multipunctella*, especially the structure of the ovipositor and the male characters, and the venation of the wings; discussion of the structure of the ovipositor in Lepidoptera characterization of the new family *Prodoxidæ* to comprise *Pronuba* and *Prodoxus*; generic and specific synonymy; reply to criticism of T. Meehan; list of insects frequenting Yucca; synonymical list of the described *Prodoxiæ*.

2001. RILEY, C. V. Additional notes on the army worm, *Leucania unipuncta*. <Proc. Amer. Assoc. Adv. Sci. for 1880 [14 October], 1881, v. 29, pp. 640–642. Separate: <Salem, Mass., July, 1881, pp. 24–26. Abstract: <Boston Daily Advertiser, 2 September, 1880, v. 136, p. 4.

Number of annual generations of *Leucania unipuncta*; stages at which hibernation takes place; occasional immigration of moths into uninfested districts; preferred breeding-places; connection of wet and dry seasons with the abundance of these insects.

2002. RILEY, C. V. The hitherto unknown life-habits of two genera of bee-flies, *Bombyliidæ*. <Proc. Amer. Assoc. Adv. Sci. for 1880 [14 October], 1881, v. 29, p. 649. Separate: <Salem, Mass., July, 1881, p. 33.

Food-animals and food-habits of *Systœchus oreas* and *Triodites mus*; parallelism in the life-history of *Bombyliidæ* and *Meloidæ*; connection of the abundance of insects of these families in the western United States with the prevalence of *Acrididæ* there; retardation of development in the early stages of these parasites explained as a beneficial characteristic.

2003. RILEY, C. V. A remarkable case of retarded development. <Sci. Amer., 20 August, 1881 [v. 59], n. s., v. 45, p. 116. S.-b. No. 23, p. —.

Report of a case in which eggs of *Caloptenus spretus* remained undeveloped for a period of four and one-half years after being laid; remarks upon the problems involved in the explanation of retarded development.

2004. [RILEY, C. V.] *Blepharoceridæ*. <Amer. Nat., September [23 August], 1881, v. 15, p. 748.

Discovery by J. Q. Adams of pupæ and imagos of *Blepharoceridæ* at Watertown, N. Y.

2005. [RILEY, C. V.] Remarkable case of retarded development. <Amer. Nat., September [23 August], 1881, v. 15, pp. 748–749.

Eggs of *Caloptenus spretus*, buried about 25 cm. (10 inches) under ground, remained unhatched and alive for four and one-half years, and hatched upon being exhumed.

2006. [RILEY, C. V.] Promotion of silk-culture in California. <Amer. Nat., September [23 August], 1881, v. 15, p. 749.

Answer to letter of Mrs. T. H. Hittell; popularization of silk-culture in California; preparation of the fiber for the market.

2007. [RILEY, C. V.] Locust flights in Dakota. >Amer. Nat., September [23 August], 1881, v. 15, pp. 749–750.

Flights of *Caloptenus spretus* in Dakota on 7th and 16th July, 1881; large numbers of *Diplax rubicundula* accompanying the locusts.

2008. [RILEY, C. V.] The Hessian fly. <Amer. Nat., September [23 August], 1881, v. 15, p. 750.

Extensive damages done by *Cecidomyia destructor* in Illinois and Missouri; its abundance in the western prairie States in 1881.

2009. [RILEY, C. V.] The genuine army-worm in the West. <Amer. Nat., September [23 August], 1881, v. 15, p. 750.

Occurrence and ravages of *Leucania unipuncta* in Illinois and Indiana in 1881; these larvæ either from eggs of hibernated moths or of a second brood; other insects mistaken for this in other States; periods of the *Leucania* and influence of the seasons upon it.

2010. [RILEY, C. V.] A new imported enemy to clover. <Amer. Nat., September [23 August], 1881, v. 15, pp. 750–751.

Clover injured by *Phytonomus punctatus* at Barrington, N. Y., in July, 1881.

2011. [RILEY, C. V.] Another enemy of the rice-plant. <Amer. Nat., September [23 August], 1881, v. 15, p. 751.

Rice-plants injured by the larva of *Laphygma frugiperda* in Georgia in the summer of 1881.

2012. [RILEY, C. V.] Canker-worms. <Amer. Nat., September [23 August], 1881, v. 15, p. 751.

Excessive ravages of *Paleacrita vernata* in Tazewell County, Illinois, in 1881.

2013. [RILEY, C. V.] Lepidopterological notes. <Amer. Nat., September [23 August], 1881, v. 15, pp. 751–752.

Advance extract from Bull. No. 6, U. S. Entomological Commission, pp. 55–56. See No. 2026 for synopsis of contents.

2014. RILEY, C. V. The periodical Cicada. <Amer. Agric., August, 1881, v. 40, p. 132, 5 figs. S.-b. No. 23, p. 141.

Brief sketch of the natural history of *Cicada* [= *Tibicen*] *septendecim* and *C.* [= *T.*] *tredecim*, with figures of all stages and of punctured twigs; the reputed stinging by these insects probably done by *Stizus grandis* [= *Sphecius speciosus*]; figure of the *Stizus*; recommends the substitution of the name "periodical Cicada" in place of the name "locust."

2015. RILEY, C. V. Entomological notes. <Farmer's Review, 22 September, 1881. S.-b. No. 42, pp. 54–55. Reprint: <Amer. Nat., [3] December, 1881, v. 15, pp. 1012–1013. See: <Sci. Amer., 11 February, 1882. S.-b. No. 38, p. 1½.

Abstract and critical review of paper by M. Saint-André; attempted explanation of the immunity of grape-vines in sandy soil from the ravages of *Phylloxera vastatrix*.

2016. RILEY, C. V. Notes on *Hydrophilus triangularis*. <Amer. Nat., October [23 September], 1881, v. 15, pp. 814–817, figs. 1–2.

Description and figures of egg-case and figures of eggs and of male imago, with structural details of *Hydrophilus triangularis*; characters and life-history of the larva and pupa; figures of eggs, egg-case, larva, and pupa of *H. piceus* of Europe.

2017. [RILEY, C. V.] Migration of plant-lice from one plant to another. <Amer. Nat., October [23 September], 1881, v. 15, pp. 819–820.

Exposition of J. Lichtenstein's theory that most *Aphididæ*, especially gall-making *Pemphigini*, live upon two different plants in passing through their cycle of development; cites instances in which the host-plants are of different families.

2018. [RILEY, C. V.] The chinch-bug. <Amer. Nat., October [23 September], 1881, v. 15, pp. 820–821.

The abundance of *Blissus leucopterus* is connected with the moisture of the season; extraordinary noxiousness of this insect in the dry season of 1881 in various parts of the United States.

2019. [RILEY, C. V.] Phylloxera laws. <Amer. Nat., October [23 September], 1881, v. 15, p. 821.

Summary of the existing laws regulating the traffic in plants, with a view of preventing the introduction of *Phylloxera vastatrix* into different countries.

2020. [RILEY, C. V.] One-half the vine area of France affected by Phylloxera. <Amer. Nat., October [23 September], 1881, v. 15, p. 821.

Statement that nearly one-fourth of the area of vineyards in France is destroyed by *Phylloxera vastatrix* and as much more attacked; submersion the only sure remedy, and the use of American resisting stocks the only available preventive.

2021. [RILEY, C. V.] London purple and Paris green. <Amer. Nat., October [23 September], 1881, v. 15, p. 821.

London purple more than twice as efficacious and less expensive than Paris green as an insecticide; it needs to be well ground; composition of London purple.

2022. [RILEY, C. V.] Entomologist for the Pacific coast. <Amer. Nat., October [23 September], 1881, v. 15, pp. 821–822.

Notice of attempts made to have a State entomologist appointed in California.

2023. [RILEY, C. V.] *Dilar* in North America. <Amer. Nat., October [23 September], 1881, v. 15, p. 822.

Notice of paper by R. McLachlan.

2024. [RILEY, C. V.] Locusts in Nevada. <Amer. Nat., October [23 September], 1881, v. 15, p. 822.

Statement from Reno [Nev.] Journal that the countless locusts which hatched in western Nevada in the spring of 1881 flew toward the Sierra Nevada without doing any injury.

2025. [RILEY, C. V.] Odor in butterflies. <Amer. Nat., October [23 September], 1881, v. 15, p. 822.

Notice of paper by Miss M. E. Murtfeldt.

2026. RILEY, C. V. General index and supplement to the nine reports on the insects of Missouri. <Bull. No. 6, U .S. Ent. Commission [24 March], 1881, 178 pp.

Order of matter: (1) Introduction. (2) Table of contents. (3) Corrections. (4) Notes and additions. (5) Descriptions of new species and varieties. (6) List of descriptions of adolescent states. (7) List of descriptions, mostly amplified, of species not new. (8) List of illustrations by reports. (9) Classified list of illustrations. (10) General index. (11) Index to food-plants.

2027. [RILEY, C. V.] The permanent subsection of entomology at the recent meeting of the A. A. A. S. <Amer. Nat., 1881, v. 15, November [28 October], pp. 909–912; [3] December, pp. 1008–1011.

Notice of the meeting at Cincinnati, Ohio, August, 1881, with abstracts and notices of papers read.

2028. RILEY, C. V. The new imported clover enemy. <Amer. Nat., November [28 October], 1881, v. 15, pp. 912–914.

Occurrence and habits of *Phytonomus punctatus* in New York; description of the egg and larva of the same; food-plants of the European species of *Phytonomus*.

2029. Riley, C. V. *Crambus vulgivagellus.* <Amer. Nat., November [28 October], 1881, v. 15, pp. 914–915.

Excessive abundance of this species in the eastern United States in 1881; description of the egg; method of oviposition.

2030. Riley, C. V. Larval habits of *Sphenophori* that attack corn. <Amer. Nat., November [28 October], 1881, v. 15, pp. 915–916.

Several species of *Sphenophorus* injurious to maize-plants in different parts of the United States; habits and ravages of *S. robustus.*

2031. [Riley, C. V.] Effect of drought on the Hessian fly. <Amer. Nat., November [28 October], 1881, v. 15, p. 916. See: <N. E. Farmer, 10 December, 1881. S.-b. No. 45, p. 39. <Farmer's Review, 15 December, 1881. S.-b. No. 45, p. 99.

Hot and dry weather dries up and kills *Cecidomyia destructor* and its parasites.

2032. [Riley, C. V.] *Simulium* from Lake Superior. <Amer. Nat., November [28 October], 1881, v. 15, p. 916.

Notice of paper by H. A. Hagen; larvæ and pupæ from Lake Superior similar to those of *S. pictipes,* but the imagos from the same locality are different.

2033. [Riley, C. V.] Coleopterous cave fauna of Kentucky. <Amer. Nat., November [28 October], 1881, v. 15, pp. 916, 917.

Notice of H. G. Hubbard's investigations; *Adelops* contains but one species, which seems to be equally common in all caves in the State; *Ancphthalmus* contains several species, and more may be expected to be found.

2034. [Riley, C. V.] Hemipterological studies. <Amer. Nat., November [28 October], 1881, v. 15, p. 917.

Notice of paper of V. Signoret.

2035. [Riley, C. V.] Entomology in Buffalo, N. Y. <Amer. Nat., November [28 October], 1881, v. 15, p. 917.

Notice of Vol. 4, No. 1, of the Bulletin of the Buffalo Society of Natural Science; list of entomological papers therein.

2036. [Riley, C. V.] *Lampyridæ.* <Amer. Nat., November [28 October], 1881, v. 15, p. 917.

Notice of paper by J. L. Leconte.

2037. [Riley, C. V.] Severe cold and hibernating apple-worms. <Amer. Nat., November [28 October], 1881, v. 15, p. 917.

According to A. J. Cook larvæ of *Carpocapsa pomonella* were killed in their cocoons where exposed to the severe cold of the winter of 1880–1881.

2038. Riley, C. V. [Address delivered 4 November, 1881, at the cotton convention held in Atlanta, Ga., 2–4 November, 1881.] <[U. S. Department of Agriculture.] Address of Hon. George B. Loring . . . and other proceedings of the cotton convention, Washington, 1881, pp. 19–35. Reprint: <Atlanta Constitution, 5 November, 1881. S.-b. No. 24, p. 34.

Beneficial and injurious influence of insects; methods of counteracting the same; ravages and natural history of and search for means against *Aletia argillacea* [=*xylina*]; improved methods and contrivances for the application of poisons to plants.

2039. RILEY, C. V. The chinch bug. <Amer. Agric., November, 1881, v. 40, p. 476, figs. 1–3. S.-b. No. 42, pp. 21–23.

Ravages, food-plants, and natural history of *Blissus leucopterus*; descriptions and figures of its several stages and of dimorphic form of the imago; effect of wet weather upon it.

2040. [RILEY, C. V.] Retarded development in insects. <Amer. Nat., [3] December, 1881, v. 15, pp. 1007–1008. Reprint: <Proc. Amer. Assoc. Adv. Sci. for 1881, [13 October], 1882, v. 30, pp. 270, 271. Notice: <Gardener's Chronicle, 27 May, 1882, v. 17, pp. 708–709. S.-b. No. 42, p. 31.

Eggs of *Caloptenus spretus* retained their vitality four and one-half years under abnormal environment and then hatched on exposure to normal conditions; speculations on the cause of the phenomena of retardation of development.

2041. [RILEY, C. V.] Preparation of Diptera. <Amer. Nat., [3] December, 1881, v. 15, p. 1008.

Notice of paper of J. Mik.

2042. [RILEY, C. V.] Another herbivorous ground-beetle. <Amer. Nat., [3] December, 1881, v. 15, p. 1011.

Anisodactylus confusus injuring strawberry-plants in California.

2043. [RILEY, C. V.] A disastrous sheep parasite. <Amer. Nat., [3] December, 1881, v. 15, p. 1011.

A parasite (*Trichodectes ovis ?*) doing great injury to sheep in Illinois.

2044. [RILEY, C. V.] Locusts in the West. <Amer. Nat., [3] December, 1881, v. 15, p. 1013.

Caloptenus spretus scarce in Colorado and Kansas; *Camnula pellucida* abundant on the Pacific coast; destructiveness of locusts in many parts of South America and of *Pachytylus migratorius* in Turkey; means adopted against the latter.

2045. [RILEY, C. V.] Structure of the claw in *Psocina*. <Amer. Nat., [3] December, 1881, v. 15, pp. 1013–1014.

Notice of paper of H. A. Hagen.

2046. [RILEY, C. V.] Insect collection for sale. <Amer. Nat., [3] December, 1881, v. 15, p. 1014.

Notice of the collection of Coleoptera left by C. Trabrandt.

2047. RILEY, C. V. Peach-tree bark-borer. Important note from Prof. C. V. Riley. <Rural New Yorker, 24 December, 1881, v. 40, p. 866. S.-b. No. 42, p. 13.

Habits and ravages of *Phlœotribus liminaris*; means against bark-borers.

2048. RILEY, C. V. The chinch-bug. <Amer. Agric., December, 1881, v. 40, p. 515, figs. 1–4. S.-b. No. 42, pp. 23–26.

Figures *Anthocoris* [= *Triphleps*] *insidiosus* and *Harpactor* [= *Milyas*] *cinctus* as enemies of *Blissus leucopterus* and *Nysius destructor* [= *angustatus*] and *Piesma cinerea* as likely to be confounded with it; mentions other enemies of the chinch-bug; means against it; importance of irrigation.

2049. RILEY, C. V. On the oviposition of *Prodoxus decipiens*. <Amer. Nat., January, 1882 [30 December, 1881], v. 16, pp. 62–63. Reprint: <Proc. Amer. Assoc. Adv. Sci. for 1881 [13 October],

2049. RILEY, C. V.—Continued.
1882, v. 30, p. 272. Separate: <[Salem, Mass., February, 1882], p. 3.

Time and manner of oviposition of *Prodoxus decipiens* in stem of *Yucca filamentosa*.

2050. [RILEY, C. V.] Clover insects. <Amer. Nat., January, 1882 [30 December, 1881], v. 16, p. 63.

Notice of paper of J. A. Lintner.

2051. RILEY, C. V. Horn's classification of the *Carabidæ*. <Amer. Nat., January, 1882 [30 December, 1881], v. 16, pp. 63–64.

Notice of paper of G. H. Horn.

2052. [RILEY, C. V.] The butterfly-trees of Monterey again. <Amer Nat., January, 1882 [30 December, 1881], v. 16, p. 64.

Swarming and migrating habits of *Danais archippus*; hibernation of the same.

2053. [RILEY, C. V.] Interest felt in economic entomology in California. <Amer. Nat., January, 1882 [30 December, 1881], v. 16, p. 65.

Notice of a call issued by the Board of State Horticultural Commissioners of California for a State convention to consider horticultural subjects, including means against insects.

2054. [RILEY, C. V.] Obituary. <Amer. Nat., January, 1882 [30 December, 1881], v. 16, p. 65.

Biographical notice of J. D. Putnam; announcement of the death of G. V. Mniszech.

2055. RILEY, C. V. New insects injurious to agriculture. <Amer. Nat., February [25 January], 1882, v. 16, pp. 151–152. Reprint: <Proc. Amer. Assoc. Adv. Sci. for 1881, [13 October], 1882, v. 30, pp. 272–273.

The occurrence of previously unnoticed noxious insects due to, 1, the introduction of species from abroad; 2, previously existing unnoticed species; and 3, the acquisition of new habits by previously known innoxious species; in the last case the acquisition of new habits may be accompanied by the acquisition of new descriptional character, thus constituting a new species; new species thus become developed within brief periods of time.

2056. [RILEY, C. V.] New entomological periodicals. <Amer. Nat., February [25 January], 1882, v. 16, pp. 152–153.

Notice of several prospective periodicals.

2057. [RILEY, C. V.] Locust probabilities for 1882. <Amer. Nat., February [25 January], 1882, v. 16, p. 153.

Favorable prospects of immunity from ravages of *Caloptenus spretus* in 1882.

2058. [RILEY, C. V.] Entomological notes. <Amer. Nat., February [25 January], 1882, v. 16, p. 153.

Notice of J. J. Weir's paper on the "Lepidoptera of the Outer Hebrides," etc.

2059. [RILEY, C. V.] Bibliography of gall literature. <Amer. Nat., March [24 February], 1882, v. 16, pp. 246–247.

Notice of the record of F. Thomas.

2060. RILEY, C. V. A new depredator infesting wheat-stalks. <Amer. Nat., March [24 February], 1882, v. 16, pp. 247–248, fig. 1.

Isosoma allynii French is a species of *Eupelmus* probably parasitic on some of the wheat-stalk feeders and on some species of *Chlorops*; habits and figures of larva and description of female imago of *Isosoma tritici* [p. 247]; comparisons between *I. tritici* and *I. hordei*; alleged habits of *I. lineare* of Europe; relative conspicuousness of the "humeral spot" in European, American, and Australian species of *Isosoma*. See No. 2063.

2061. RILEY, C. V. Further notes on the imported clover-leaf weevil (*Phytonomus punctatus*). <Amer. Nat., March [24 February], 1882, v. 16, pp. 248, 249.

Identity of *Phytonomus opimus* Lec. with *P. punctatus* Fab.; instances in which injurious insects have been overlooked for a long time; probability that plant-feeding Coleoptera imported from Europe will not spread far from the Atlantic coast; some species, injurious in Europe, are thus far innoxious in America; hibernation of and means against *P. punctatus.*

2062. [RILEY, C. V.] Silk-worm eggs; prices and where obtained. <Amer. Nat., March [24 February], 1882, v. 16, pp. 249–250.

Sources from which eggs of *Sericaria mori* can be obtained in the United States for purposes of silk-culture; prices at which eggs are sold by Crozier & Co.

2063. RILEY, C. V. The wheat *Isosoma*. A new depredator infesting wheat-stalks. <Rural New Yorker, 4 March, 1882. S.-b. No. 42, pp. 55–56. See: <Sci. Amer. Suppl., 17 June, 1882. S.-b. No. 37, p. 57.

Description of female imago of *Isosoma tritici*; habits, ravages, and distribution of and means against the same; comparison with related species; a probable parasite of it, described as *Isosoma allynii* by G. H. French, belongs to the genus *Eupelmus*. See No. 2060.

2064. RILEY, C. V. Possible food-plants for the cotton-worm. <Amer. Nat., April [22 March, 1882], v. 16, pp. 327–329. Reprint: <Rept. [U. S.] Com. Agric. for 1881 and 1882, 1882 [January, 1883], pp. 164–166. Separate: <pp. 164–166.

Food-plants of *Aletia xylina*. See No. 2119 for synopsis of contents.

2065. [RILEY, C.V.] Mode of feeding on the larva of *Dytiscus*. <Amer. Nat., April [22 March], 1882, v. 16, p. 330.

Notice of paper of E. Burgess; structure of the mouth of the larva of *Dytiscus*; manner in which this larva feeds.

2066. [RILEY, C. V.] Entomological notes. <Amer. Nat., April [22 March], 1882, v. 16, p. 330.

Brief notices of several articles recently published with items of news.

2067. [RILEY, C. V.] Riley's researches. Orange insects and the cotton-worm; how the orange insect operates and the cure for its ravages; the hibernation of the cotton-worm; settlement of a mooted question. <Florida Daily Times, 29 March, 1882. S.-b. No. 42, pp. 28–29.

Report of interview with C. V. Riley; discovery by W. H. Ashmead that "orange rust" is caused by a mite; habits of and means against the same;

2067. RILEY, C. V.—Continued.

successful application by H. G. Hubbard of an emulsion of kerosene and milk as a means against this mite and against scale-insects; proof of the hibernation of *Aletia argillacea* [=*xylina*] in the extreme south of the United States; means against the *Aletia*.

2068. RILEY, C. V. Prof. C. V. Riley and the Yucca moth. <Gardener's Mo. and Hortic., March, 1882, v. 24, p. 92. S.-b. No. 23, pp. 198–199.

Critical review and reply to editorial of T. Meehan.

2069. RILEY, C. V. The *Noctuidæ* in the Missouri entomological reports. <Papilio, March, 1882, v. 2, pp. 41–44. Separate: <N. Y., 1882, 4 pp.

Critical review of paper of A. R. Grote; discussion of the synonymy of the *Noctuidæ* in the Missouri entomological reports.

2070. RILEY, C. V. Silk-culture in the United States. <Sci. Amer., 1 April, 1882 [v. 60], n. s., v. 46, p. 193. S.-b. No. 42, pp. 93–96.

Statement of the dangers to be avoided and the obstacles to be overcome for the successful establishment of silk-culture in the United States.

2071. RILEY, C. V. Little known facts about well known animals. A lecture delivered in the National Museum, Washington, D. C., April 8, 1882. <Washington, April, 1882, 32 pp., figs. See: <National Farmer, 13 July, 1882. S.-b. No. 42, p. 15. <Prairie Farmer, 22 July, 1882. S.-b. No. 46, p. 99.

The entomological subjects include brief and popular illustrated accounts of the life-histories and transformations of the house-fly (*Musca domestica*) and mosquito (*Culex pipiens*); the development of *Trombidium* from *Astoma;* parasitism; truth of the theory of evolution; reasons for the prevalent ignorance of natural history; interest and value of a knowledge of natural history.

2072. RILEY, C. V. Lichtenstein's theory as to dimorphic asexual females. <Amer. Nat., May [24 April], 1882, v. 16, p. 409.

Criticism of J. Lichtenstein's theory that winged female *Aphididæ* and asexual female *Cynipidæ* are larvæ, and their eggs pupæ; errors in the comparison of these forms with the hypermetamorphotic stages of *Meloidæ*.

2073. [RILEY, C. V.] Naphthaline cones for the protection of insect collections. <Amer. Nat., May [24 April], 1882, v. 16, pp. 409–410.

Use of and objections to the use of naphthaline cones; formula of a preferable protective mixture.

2074. [RILEY, C. V.] Injurious insects in California. <Amer. Nat., May [24 April], 1882, v. 16, p. 410.

Notice of treatise of Matthew Cooke.

2075. [RILEY, C. V.] *Sarcophaga lineata* destructive to locusts in the Dardanelles. <Amer. Nat., May [24 April], 1882, v. 16, pp. 410–411.

Notice of communications, by F. Calvert, regarding the parasitic habits of *Sarcophaga lineata*, which preys upon *Œdipoda cruciata*; egg-pods of the same locust destroyed by larvæ of *Callostoma fascipennis*.

2076. [RILEY, C. V.] Parasitic Diptera. <Amer. Nat., May [24 April], 1882, v. 16, p. 411.

Dilophus parasitic in larvæ of *Chætoptria hypericana*; the *Bibionidæ* have hitherto been known only as vegetable feeders in the larval state.

2077. RILEY, C. V. The cotton-worm. <Times-Democrat [New Orleans], 7 May 1882, v. —, p. 4. S.-b. No. 42, pp. 29–31; 112–113; No. 63, pp. 47–48. Reprint: <Rept. [U. S.] Com. Agric. for 1881 and 1882, 1882 [January, 1883], pp. 157–159. Separate: <pp. 97–99.

See No. 2119 for synopsis of contents.

2078. RILEY, C. V. The house-fly. <Prairie Farmer, 13 May, 1882. S.-b. No. 39, p. 122. See: <Colman's Rural World, 15 June, 1882. S.-b. No. 68, p. 194. <Times-Democrat [New Orleans], 24 June, 1882. S.-b. No. 42, p. 31. <N. E. Farmer, 5 August, 1882.

Wide distribution of *Musca domestica*; identity of *M. harpyia* with the species; description of eggs; habits, transformations, and hibernation.

2079. RILEY, C. V. Habits of *Cybocephalus*. <Amer. Nat., June [20 May], 1882, v. 16, p. 514.

Cybocephalus nigritulus feeds on scales of *Chionaspis pinifolii* on *Pinus elliottii* in South Carolina, and *C. californicus* on a scale on apple-trees in California.

2080. [RILEY, C. V.] One effect of the Mississippi floods. <Amer. Nat., June [20 May], 1882, v. 16, pp. 514, 515.

Probability that *Ligyrus rugiceps* will have been drowned out of the region submerged for months by the Mississippi River; liability of the importation of new foes with new seed-plants.

2081. [RILEY, C. V.] *Doryphora decemlineata* in England. <Amer. Nat., June [20 May], 1882, v. 16, p. 515.

A living specimen carried from North America to London, England, in a barrel of potatoes.

2082. [RILEY, C. V.] Dr. Dimmock's inaugural dissertation. <Amer. Nat., June [20 May], 1882, v. 16, p. 515.

Review of G. Dimmock's paper on "The anatomy of the mouth-parts and of the sucking apparatus of some Diptera."

2083. [RILEY, C. V.] The triungulin of *Meloidæ*. <Amer. Nat., June [20 May], 1882, v. 16, p. 515.

The triungulin of *Meloe proscarabæus* was described by J. L. Frisch in 1727.

2084. [RILEY, C. V.] Fossil tineids. <Amer. Nat., June [20 May], 1882, v. 16, p. 515.

Notice of paper of V. T. Chambers; occurrence of the supposed burrow of a tineid larva in a fossil leaf of *Acer* sp.

2085. [RILEY, C. V.] Classification of North American Coleoptera. <Amer. Nat., June [20 May], 1882, v. 16, pp. 515–516.

Notice of the approaching completion of the classification of the Coleoptera of North America by J. L. Leconte and G. H. Horn.

2086. RILEY, C. V. Hibernation of the army-worm. <Amer. Nat., June [20 May], 1882, v. 16, p. 516.

Confirmation of views in regard to the hibernation of the larvæ of *Leucania unipuncta*; places of oviposition; prospects of extensive injury by these insects in the more northern States in 1882.

2087. RILEY, C. V. Chinch-bug and army-worm prospects. <Rural New Yorker, 27 May, 1882. S.-b. No. 61, p. 27.

Blissus leucopterus abundant in dry weather; *Leucania unipuncta* in wet weather; the latter hibernates principally as a larva; its eggs secreted in old grass and stubble; means against *L. unipuncta.*

2088. RILEY, C. V. Successful management of the insects most destructive to the orange. <Sci. Amer., 27 May, 1882 [v. 60], n. s., v. 46, pp. 335–336, 5 figs.

Treats of *Coccidæ* injurious to the orange; means against the same; use of kerosene emulsion; figures stages of *Mytilaspis pomicorticis* [=*pomorum*], *M. gloveri*, and *M. citricola.*

2089. RILEY, C. V. The utilization of ants in horticulture. <Nature, 8 June, 1882, v. 26, p. 126. Reprint: <Gardener's Chronicle, 17 June, 1882, v. 17, p. 805. S.-b. No. 42, p. 32.

Abstract of paper of C. J. Macgowan; capture and sale of two species of ants which build nests in trees; colonization of these ants in orange orchards to destroy injurious insects.

2090. RILEY, C. V. The army-worm *vs.* the clover hay-worm. Remedies for the army-worm. <Rural New Yorker, 10 June, 1882. S.-b. No. 47, pp. 158–159; No. 61, pp. 32–33. Reprint: <Nat. Farmer, 22 June, 1882. S.-b. No. 37, p. 123. <Lancaster Farmer, July, 1882. S.-b. No. 46, p. 104. <Home and Farm, 1 July, 1882. S.-b. No. 37, p. 122.

Abundance of *Leucania unipuncta* and *Asopia costalis* in Alabama and Tennessee; confusion of the army-worm with the clover hay-worm; prevalence of enemies of and means against the former.

2091. RILEY, C. V. Repelling insects by malodorants. <Amer. Nat., July [22 June], 1882, v. 16, p. 596.

Critical review of paper of J. A. Lintner; odorous substances repel insects more by their toxic properties than by their odor; failure of attempts by the use of strongly smelling substances to prevent oviposition; sight, touch, and taste generally more important in insect economy than smell.

2092. [RILEY, C. V.] Habits of *Bittacus apterus.* <Amer. Nat., July [22 June], 1882, v. 16, pp. 596–597.

Notice of paper of C. R. Osten Sacken; locomotion and food-habits of *Bittacus apterus* in California.

2093. RILEY, C. V. Habits of *Coscinoptera dominicana.* <Amer. Nat. July [22 June], 1882, v. 16, p. 598.

Discovery by F. H. King that *Coscinoptera dominicana* is inquilinous in ants' nests in its earlier stages; similar habits of related species.

2094. [RILEY, C. V.] Sun-spots and insect life. <Amer. Nat., July [22 June], 1882, v. 16, pp. 598–599.

Review of paper of A. H. Swinton; dependence of certain insect phenomena on the periods of sun-spots, through the determination by the latter of meteorological conditions.

2095. **Riley, C. V.** The silk-worm. No. 1–3. <National Farmer, 13, 20, 27 July, 1882. S.-b. No. 35, p. 15; No. 48, pp. 32, 49.

Nature of the silk-worm; stages, enemies, diseases, races; wintering and hatching of eggs; feeding and rearing of larvæ; the cocoons; spinning and gathering, choking chrysalids; egg-laying, reproduction, reeling, food-plants.

2096. **Riley, C. V.** Change of habit; two new enemies of the egg-plant. <Amer. Nat., August [28 July], 1882, v. 16, pp. 678–679.

Sudden acquisition by *Doryphora juncta* and by *Cassida texana* of the habits of feeding on *Solanum melongena*, these species having been found previously on *S. carolinense* and *S. elæagnifolium* respectively; occurrence of *C. texana* on *S. carolinense*; distribution of the two insects.

2097. **Riley, C. V.** Notes on *Microgasters*. <Amer. Nat., August [28 July], 1882, v. 16, pp. 679–680.

Critical review of paper of A. S. Packard; synomymical notes on Packard's species.

2098. **[Riley, C. V.]** Are honey-bees carnivorous? <Amer. Nat., August [28 July], 1882, v. 16, p. 681.

Observations of Fritz Müller on the carnivorous habits of Brazilian *Apidæ*.

2099. **[Riley, C. V.]** The "overflow bugs" in California. <Amer. Nat., August [28 July], 1882, v. 16, pp. 681–682.

Extract from letter of Mrs. A. E. Bush, with introductory remarks; occurrence of *Platynus maculicollis* in such abundance as to become a nuisance.

2100. **[Riley, C. V.]** Insects and drouth. <Amer. Nat., September [24 August], 1882, v. 16, p. 745.

Occurrence of excessive drouth in the spring and early summer of 1880 in New England; statement by S. Lockwood of the exceptional abundance of several insects in New Jersey in that year.

2101. **Riley, C. V.** Probable sound organs in sphingid pupæ. <Amer. Nat., September [24 August], 1882, v. 16, pp. 745–746.

Occurrence of a peculiar structure on the abdominal joints of the pupæ of certain *Sphingidæ*; genera in which this structure is observed; probable connection of this structure with the function of producing sound as observed in *Sphinx atropos*.

2102. **Riley, C. V.** Is *Cyrtoneura* a parasite or a scavenger? <Amer. Nat., September [24 August], 1882, v. 16, pp. 746–747.

Cyrtoneura stabulans bred from pupæ of *Aletia argillacea* [=*xylina*] usual food of this species; doubt whether the species is a parasite or is only a scavenger in decayed pupæ; *Phora aletiæ* merely a scavenger; great liability of pupæ of *Aletia* to decay

2103. **[Riley, C. V.]** Habits of *Polycaon confertus* Lec. <Amer. Nat., September [24 August], 1882, v. 16, p. 747.

Polycaon confertus bores in twigs of apple- and pear-trees and grape-vines; the larvæ probably live in the dead and dry wood of forest-trees.

2104. **Riley, C. V.** *Dinoderus pusillus* as a museum pest. <Amer. Nat., September [24 August], 1882, v. 16, p. 747.

Dinoderus pusillus feeds on cork and paper lining in an insect box; they occur usually in drugs and other stored and dry vegetal products.

2105. RILEY, C. V. Myrmecophilous Coleoptera. <Amer. Nat., September [24 August], 1882, v. 16, pp. 747–748.

Larvæ and imagos of *Euphoria hirtipes* live in hills of *Formica rufa*; pupæ of *Hymenorus rufipes* in nests of *Formica fusca* and of *H. obscurus* in nests of another species of ant; known myrmecophilous habits of *Cetonia*, *Cremastochilus*, *Euparia castanea* (in nests of *Solenopsis xyloni* [=*geminata*]), *Tenebrionidæ*, and *Anthicus*.

2106. [RILEY, C. V.] Discontinuance of publication. <Amer. Nat., September [24 August], 1882, v. 16, p. 748.

Announcement of the discontinuance of publication of "Revue Coléoptérologique;" critical review of the same.

2107. RILEY, C. V. Buffalo tree-hopper injurious to potatoes. <Amer. Nat., October [28 September], 1882, v. 15, p. 823.

Habits, food-plants, and ravages of *Ceresa bubalus*.

2108. [RILEY, C. V.] Moths attracted by falling water. <Amer. Nat., October [28 September], 1882, v. 16, p. 826.

Notice of paper of J. S. Gardner; gleaming water-falls in Iceland as attractive to moths as artificial light would be.

2109. [RILEY, C. V.] A new museum pest. <Amer. Nat., October [28 September], 1882, v. 16, p. 826. Reprint: <Psyche, September–October, 1882 [1 March, 1884], v. 3, p. 408.

Perimegatoma variegatum as a pest in collections of insects.

2110. [RILEY, C. V.] Fleas feeding on lepidopterous larvæ. <Amer. Nat., October [28 September], 1882, v. 16, p. 826.

Notice of paper of C. J. Boden; abundance of fleas (*Pulex* sp.) where few or no warm-blooded animals occur may be explained by the feeding of the fleas on insects.

2111. [RILEY, C. V.] [*Gasteracantha cancer.*] <Gonzales [Tex.] Inquirer, 30 September, 1882. S.-b. No. 42, p. 15.

Habits of *Gasteracantha cancer*; the male unknown.

2112. RILEY, C. V. *Cicada septendecim.* <Gardener's Mo. and Hortic., September, 1882, v. 24, pp. 274–275. S.-b. No. 38, p. 42; No. 39, p. 6; No. 42, pp. 2–4.

Orthography of the names *C.* [=*Tibicen*] *septendecim* and *C.* [=*T.*] *tredecim*; natural relations of the same; indistinguishability of the species of certain genera; dimorphic forms more numerous than usually recognized; *Massospora cicadina* parasitic on *Cicada*.

2113. RILEY, C. V. Remarkable felting caused by a beetle. <Rural New-Yorker, 14 October, 1882, v. 41, pp. 699–700. S.-b. No. 42, p. 16. Reprint, with changes: <Amer. Nat. [2] December, 1882, v. 16, pp. 1018–1019.

Description of the felting of the interior of a pillow-ticking with fragments of feathers formed by the ravages of *Attagenus megatoma* within a feather pillow.

2114. RILEY, C. V. The buckeye-leaf stem-borer. <Amer. Nat., November [28 October], 1882, v. 16, pp. 913–914. See: <Sci. Amer. Suppl., 16 December, 1882. S.-b. No. 47, p. 145.

Sericoris instrutana ‡Claypole = *S.* [=*Steganoptycha*] *claypoleana* n. sp.; habits and food-plants of this species and of *Proteoteras æsculana*; distinctions between these two species.

2115. [Riley, C. V.] Efficacy of chalcid egg-parasites. <Amer. Nat., November [28 October], 1882, v. 16, pp. 914–915. See: <Prairie Farmer, 2 December, 1882. S.-b. No. 60, p. 123.

Beneficial influence and occasional vast abundance of egg-parasitic *Chalcididæ* and especially of *Trichogramma pretiosa* and of *Telenomus* sp.

2116. [Riley, C. V.] On the biology of *Gonatopus pilosus* Thoms. <Amer. Nat., November [28 October], 1882, v. 16, p. 915.

Notice of paper of J. Mik; parasitism of *Gonatopus pedestris* on *Athysanus maritima*, and of *G. pilosus* on *Deltocephalus xanthoneurus*; transformations and habits of *G. pilosus*; probable parasitism of a *Gonatopus* (*G. contortulus*?) on *Amphiscepa bivittata.*

2117. Riley, C. V. Species of *Otiorhynchidæ* injurious to cultivated plants. <Amer. Nat., November [28 October], 1882, v. 16, pp. 915–916. See: <Sci. Amer. Suppl., 16 December, 1882. S.-b. No. 47, p. 145.

Aramigus fulleri the only species of North American *Otiorhynchidæ* whose development and earlier stages are known; food-plants of several species; discovery by G. P. Peffer of the injuries of *Anametis grisea* upon roots of apple- and pear-trees.

2118. [Riley, C. V.] Bombyliid larvæ destroying locust eggs in Asia Minor. <Amer. Nat., November [28 October], 1882, v. 16, pp. 916–917.

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CONTENTS.

Introduction 1

Plan of the report, 1—Insufficiency of former appropriations to the Entomological Division, 1—Reorganization of the Division, 1—Great increase in the correspondence of the Division, 2—Preparation of special bulletins, 2—Periodical bulletins desirable, 2—Special reports in preparation, 2—Work of the United States Entomological Commission, 3—The United States National Museum in connection with the Entomological Division, 3—Assistants, agents, and observers of the Division, 3—The illustrations to the report, 4.

Extracts from correspondence 4

Miscellaneous correspondence on various insects injurious to vegetation in 1881–'82, 4.

Silk culture 7

Distribution of eggs by the Department, 7—Mr. L. S. Crozier's opinion as to the value of American silk products, 7—Mr. E. Fasnach on the importance of a home market for silk products, 8—Associations, 8—Ladies' Association at Spring Hill, Ala., 8—Women's Silk Culture Association of California, 8—Women's Silk Culture Association of the United States, 8—American Silk Exchange in New York, 8—Sales of eggs and cocoons in the

2119. Riley, C. V.—Continued.

Silk culture—Continued.

United States, 9—Various reports from correspondents of the division, 9—Experience in 1882 at the Department in raising worms fed on osage orange or mulberry, 11—New mulberry tree from southern Russia, 13—Business ventures in the United States in connection with silk-producing industry, 13—Sale of eggs, 13—Second edition of the manual of silk culture, 14—Preface thereof, 14—Reasons why the growing interest in silk culture in the United States should be checked at the present time, 15—Import duty on raw silk demanded, 16.

Pyrethrum: Its use as an insecticide 16

Circular in reference to Pyrethrum, 16—Distribution of seed by the Department, 16—History of Pyrethrum in Asia and Dalmatia, 17—Experience in growing *Pyrethrum roseum* in America, 17—Soil best adapted for raising the plant, 18—The Dalmatian plant in California, 18—Experience with raising the plant at Washington, 18—Preparation of the plant for use, 18—Gathering and drying the flowers, 18—Pulverizing, 19—Keeping the powder, 19—Advantages and disadvantages of the powder as an insecticide, 19—How Pyrethrum affects different insects, 19—Modes of application, 19—Pyrethrum as dry powder, 19—Pyrethrum applied in fumes, 20—Alcoholic extract, 20—The powder stirred up in water, 20—Tea or decoction, 21—Reports from persons to whom Pyrethrum seed was sent, 21—Success in raising the plant at Washington, 24—Miss M. E. Murtfeldt's experiments with powder on various insects, 25.

Chinch-bug notes, *Blissus leucopterus* 27

Professor Thomas' predictions for 1881, 27—1881 a chinch-bug year, 27—Injury in spring of 1882 in the western States, 27—Irrigation as remedy, 28—Use of kerosene emulsions, 29.

The army worm, *Leucania unipuncta* 29

Habits and natural history, 30—History of investigation in America, 30—Where the eggs are laid, 30—When the eggs are laid, 31—Mode of oviposition, 31—Prolificacy of the moth, 32—Duration of the egg state, 32—Habits of the young worms, 32—Guenée's characterization of Leucania larvæ, 32—Marching of the worms abnormal, 33—The marching worm not a distinct race, 33—Duration of worm life, 34—Remedies, 34—Burning old grass, 34—Predictions of army-worm years unreliable, 35—Meteorological influences on the species, 35—Ditching and fencing as remedies, 36—Use of arsenical poisons, 36—Kerosene and coal tar, 36—Heavy rolling not to be recommended, 37—"Drawing the rope" of little avail against the worm, 37—Mr. L. O. Howard's report on army-worm injury, 1881, in Illinois and Indiana, 37—Reports from correspondents, spring of 1882, 39—Rev. Samuel Lockwood's account of the invasion of 1880, in New Jersey, 44.

Scale insects of the orange, by H. G. Hubbard 46

Characterization of the species, 46—Comparative destructiveness of the three species treated of, 47—Periods of migration, growth, and incubation, 47—Scale insects easily assailable only during a brief period of their development, 48—The hatching process and its maximum periods, 48—Great vitality of the eggs, 49—The work of enemies and parasites, 49—Lady-bugs, lace-wings, and lepidopterous enemies, 48—Importance of mites as external

2119. **Riley, C. V.**—Continued.

SCALE INSECTS OF THE ORANGE—Continued.

enemies of scale insects, 49—Hymenopterous parasites the most efficient destroyers, 49—Sudden outbursts of the pest, 50—Destruction of the scales by their own undue increase, 51—Injury inflicted on young trees, and faulty methods of destroying the scales, 51—Recapitulation, 51—Remedies, 52—Danger in applying undiluted volatile oils, 52—Kerosene, when properly applied, not injurious to the tree, 52—Process of preparing kerosene butter, 52—Nature of kerosene butter, 53—How it should be applied, 54—The kerosene butter a sure remedy, 54—How it affects the scales and the eggs, 54—The aquapult force-pump very convenient for applying kerosene emulsions, 54—Effect of kerosene emulsion on the tree, 55—Kerosene emulsions experimented with, 55—Whale oil soap as remedy, 56—Oil of creosote, its effect on scale insects and on the trees, 56—Saponaceous compounds of creosote, 57—Creosote inferior to kerosene as insecticide, 57—Various other substances as remedies, 57—Tables of experiments, 60—Note on more recent discoveries in producing kerosene emulsions, by C. V. Riley, 67.

INSECTS AFFECTING THE RICE-PLANT 67

Rice production in the United States in 1879, 67.

The rice-grub, *Chalepus trachypygus* 68

Mr. L. O. Howard's observations on the occurrence and habits of the insect, 68—It can easily be kept in check, 68—Structural characters and geographical distribution of the genus Chalepus, 69—Description of imago and larva, 69.

The water-weevil, *Lissorhoptrus simplex* 70

Colonel Screven on the specific identity of "the maggot" and "the water-weevil," 70—Mr. L. O. Howard's report on the occurrence of larva and beetle in rice-fields, 70—Habits of the beetle, 71—Remarkable shape of the larva, 71—Characters of the genus Lissorhoptrus, 72—Description of the imago, 72—Description of the larva, 72.

The rice-stalk borer, *Chilo oryzœellus* 73

Mr. Howard's account of the work of the larva and the damage caused by it, 73—Enemies, 74—Preventive measures, 74—Difficulties in the specific determination of the insect, 74—Characteristics of the genus Chilo, 75—Description of the moth, 75—Description of larva and pupa, 75.

White blast 76

Colonel Screven's account of the disease, 76—Mr. Howard's observations on the insects found on the diseased plants, 77—The blast possibly caused by insect work, 77.

Other insects injurious to growing rice 78

The "grass-worm" and its injury, 78—The "lubber grasshopper," 78—*Acridium obscurum* and various Heteroptera, 78.

INSECTS AFFECTING CORN OR MAIZE 78

The corn-bill bug, *Sphenophorus robustus* 78

Species of Sphenophorous injurious to agriculture, 78—Nature of damage done by the beetles, 79—Mr. Howard's report on the work of the larva and its development, 79—Preventive measures, 80—Burning the stubble in winter time to be recommended, 80—Generic characters of Sphenophorus and its natural groups, 80—Diagnosis of the imago, 81—Description of the larva, 81—Larva of

2119. RILEY, C. V.—Continued.

INSECTS AFFECTING CORN OR MAIZE—Continued.

Rhodobœnus 13-*punctatus* and *Rhynchophorus zimmermanni*, 82—Description of the pupa, 82.

The smaller corn-stalk borer, *Pempelia lignosella* 82

First appearance of the pest, 82—Geographical distribution in the United States, 83—Habits and natural history, 83—Work of the larva, 83—Transformation, 83—Habits of the moth, 83—Preventive measures, 84—Color variations of the moth, 84—Mouth parts of the moth, 84—Description of the larva, 84—Description of the pupa, 85.

The boll-worm, alias corn-worm, *Heliothis armigera* 85

Injury to corn in 1881, 85—Food-plants, 85—Identity of the corn-worm and boll-worm, 85—Number of broods in the northern States, 86—Nature of damage done to corn, 86—The worm also feeding on hard corn, 87—Corn-feeding broods in the southern States, 87—Damage done to tomatoes, 88—Food-plants of the families Solanaceæ and Leguminosæ, 88—Cucurbitaceous and malvaceous food-plants, 89—Various other food-plants, 89—List of food-plants probably still incomplete, 89—Carnivorous habit of the worm, 89—Report upon *Heliothis armigera*, by Judge Lawrence Johnson, 90.

THE COTTON-WORM, *Aletia xylina* 92

Address by C. V. Riley before the Atlanta cotton convention, 93—Past work on the practical side of the cotton-worm question, 93—Obstacles and difficulties of the investigation, 93—Natural history, 94—The insect in its different stages, 94—Time of development and first appearance of the worms, 94—Poisons best applied from beneath, 95—Improvements in machinery for applying poisons, 95—Nozzles of various forms, 96—Machinery for poisoning from below, 96.

Protection from injury in regions overflowed by the Mississippi..... 97

Poisons should be applied to the under surface of the leaves, 98—Paris green and London purple, 98—Sprinkling and sifting, 98—Device for mixing poisons and diluents, 98—Arsenic and arseniate of soda, 98—Early poisoning, 99.

Poisoning devices—machine for spraying from below............... 99

The skid, 99—Device for thorough mixing and filling the barrel, 100—Details of barrel, pump, and stirrer, 100—Inserting and extricating the stirrer-bar, 100—Fork of the descending pipe, 100—The nozzles, 102.

Damage in 1881 102

Loss of cotton by worms by States and counties, 102—Loss of cotton by worms in 1881, tabulated, 104.

Possible food-plants of the cotton-worm 105

No other food-plant than cotton yet found, 104—Eggs of *Anomis erosa* found on *Urena lobata*, 104—Eggs and young larvæ of *Anomis erosa* distinguished from those of *Aletia xylina*, 105—Plants upon which eggs related to Aletia were found in the Department herbarium, 105—Localities for malvaceous plants, with possible food-plants of Aletia indicated, 105.

The question of hibernation settled 106

Theories of hibernation, 106—Eggs deposited early in March, 106—The early brood of worms, 106—Where the moth hibernates, 106—Value of fall and winter preventive work, 106.

2119. **Riley, C. V.**—Continued.

MISCELLANEOUS INSECTS 107

The Urena anomis, *Anomis erosa* 107

Habits and natural history; resemblance to the cotton-worm, 107—Distribution, 107—Its eggs mistaken for those of Aletia, 108—Distinguishing characters, 108—Habits of larvæ, 108—Characters of moth, 109—Descriptive, 109.

The clover leaf-beetle, *Phytonomus punctatus* 111

Habits of the genus Phytonomus, 111—*Ph. punctatus* an European insect, 111—Food-plants of European species, 111—History of *Ph. punctatus* in N. A., 111—Specific identity of *Ph. punctatus* and *Ph. opimus*, 112—When first noticed as destructive, 112—Damage in Yates County, N. Y., in 1881, 112—Mr. Schwarz's observations in June, 1882, 113—Life history of the species, 113—The eggs, 113—The newly-hatched larvæ, 113—Method of locomotion of larvæ, 114—The cocoon, 114—Method of spinning, 115—Its method of spinning differs from that alleged of the European *Ph. rumicis*, 115—Principal damage done in the beetle state, 115—Feeds on white and red clover, 115—Length of life in the different states, 115—Number of annual broods, 116—A second brood exceptional, 116—Remedies, 117—Will it spread?, 117—Natural enemies, 117—Description of earlier states, 118.

The vagabond Crambus, *Crambus vulgivagellus* 119

History of its injury and identification, 119—Correspondence with Professor Lintner, 119—Abundance of the moths in the eastern States in 1881, 119—Habits and natural history, 119—The eggs, 120—The larva and its tube, 120—Habits of the moth, 120—Damage done by the worms, 120—Parasites, 121—Similarity of habit in an European species, 121—Remedies, 121—Descriptive, 121—Specimens from Vancouver's Island compared, 121—Descriptions of earlier states, 122—Bibliographical list, 122.

The wheat Isosoma, *Isosoma tritici* 123

Past history and habits, 123—When first studied, 123—Professor Thomas finds it in Illinois and Dr. Packard in Virginia, 123—Its work differs from that of the joint-worm, 123—Its injuries in Missouri, 124—Professor French's observations, 124—Comparisons with the joint-worm and other allied species, 124—Errors corrected, 125—Its relationship to the European *I. lineare*; habits of latter, 125—Number of broods, 125—Remedies, 125—Parasites, 126—Descriptive, 126—Bibliographical list, 126.

The sorghum web-worm, *Nola sorghiella* 127

Its injuries, 127—Letter from J. P. Stelle, 127—Habits, 128—Method of work, 128—Systematic position, 128—Descriptive, 128—Earlier stages, 129.

The catalpa sphinx, *Ceratomia catalpæ* 129

Value of the catalpa tree, 129—Its usual exemption from insect attacks, 129—Past history of *Sphinx catalpæ*, 129—Its larvæ used as fish bait, 130—Its distribution, 130—Extracts from correspondence concerning the larva, 130—Characters and natural history: The eggs, 131—The larvæ, 131—The pupa, 131—Description of the moth, 131—Number of broods, 132—Remedies, 132—Descriptive, 132—Peculiarity of structure of pupa, 133.

The osage orange sphinx, *Ceratomia hageni* 133

Value of the osage orange, 133—Its comparative exemption from insect attack, 133—Rarity of the osage orange sphinx, 133—Its generic place, 133—Characters of the species, 134—Its affinities, 134—Description of larva, 134.

2119. **Riley, C. V.**—Continued.

REPORT ON MISCELLANEOUS INSECTS, BY PROF. J. HENRY COMSTOCK. 135

The apple-maggot, *Trypeta pomonella* 135

Its importance compared with the codlin moth, 135—Method of work, 135—Food-plants, 135—Its spread, 136—Extracts from correspondence, 136—Early apples principally infested, 136—Technical descriptions of different states, 137—Remedies, 138—Manner of distinguishing it from codlin-moth larva, 138.

The vine-loving pomace-fly, *Drosophila ampelophila* 138

Reasons for popular name, 139—Reasons for treating of the species, 139—Where found, 139—Rapidity of multiplication, 139—Destructive to grapes, 139—Technical descriptions of different stages, 140—Remedies, 141.

The pretty pomace-fly, *Drosophila amœna* 141

Technical descriptions of different stages, 141—Remedies, 142.

The ocellate leaf-gall of the red-maple, *Sciara ocellaris* 142

Distribution, 142—Description of gall, 142—Description of larva, 143—Its cocoon, 143—Number of generations, 143—Gall described as cecidomyid by Osten-Sacken, 143—Another gall-making Sciara, 143—Description of adult male, 144.

Ladybirds, *Coccinellidæ* 144

General remarks on habits, 144—The ashy-gray ladybird, 144—Description of larva, 144—Description of pupa, 145—The adult, 145—The blood-red ladybird, 145—Description of pupa, 145—The ladybird of the cactus, 145—Descriptions of larva and pupa, 145—The ambiguous Hippodamia, 146—Descriptions of larva and pupa, 146—Other species observed at Los Angeles, Cal., 146.

Methods of destroying scale insects 146

Note by the Entomologist, dissenting from the conclusions of this article, 146—Letter from S. F. Chapin, 147—Letter from Matthew Cooke, 148—Method of spraying trees in groves, 148—Mr. Chapin's contrivance, 148.

Lac insects, *Carteria* 149

General remarks, 149—The genus Carteria of Signoret, 49—*Carteria lacca* (Kerr); general appearance, 149—Preparation for study, 150—Technical description, 150—Remarks on Mr. Carter's description, 151—*Carteria larreæ* n. sp., 151—Remarks on the creosote plant, 151—Mr. J. M. Stillman's paper, 151—Differs from *C. lacca*, 151—Technical description of *C. larreæ*, 152—*Carteria mexicana* n. sp., 152—Where found, 152—General appearance, 152—Technical description, 152.

A new wax insect, *Cerococcus quercus* 153

General description, 153—Can it be utilized?, 153—*Cerococcus* new genus, 153—*Cerococcus quercus* n. sp., 153—Female sac, 153—Female, 154—Male sac, 154.

Note on the structure of mealy bugs 154

The anal and genital openings distinct, 154—Two pairs of openings homologous with the honey tubes of Aphididæ, 154.

2120. [**Riley, C. V.**] A new rice stalk-borer: Genus-grinding. <Amer. Nat., [2] December, 1882, v. 16, pp. 1014–1015.

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2122. [RILEY, C. V.] The army-worm in 1882. <Amer. Nat., [2] December, 1882, v. 16, p. 1017.

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2123. [RILEY, C. V.] The wheat-stalk worm on the Pacific coast. <Amer. Nat., [2] December, 1882, v. 16, pp. 1017–1018.

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2126. RILEY, C. V. Emulsions of petroleum and their value as insecticides. <Rural New Yorker, 9 December, 1882, v. 41, pp. 833, 834. S.-b. No. 42, pp. 17–18.

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2128. RILEY, C. V. The "cluster-fly." <Prairie Farmer, 23 December, 1882, v. 54, p. 7. S.-b. No. 42, pp. 16–17. Reprint: <Amer. Nat., [5] January, 1883, v. 17, pp. 82–83.

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Analysis of the interest shown by C. R. Darwin in entomology and of his contributions to the same.

2130. RILEY, C. V. The cotton-worm. <Western Farmer's Almanac for 1883, 1882, p. 40. S.-b. No. 42, p. 71.

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2132. [RILEY, C. V.] New lists of North American Lepidoptera. <Amer. Nat., [5] January, 1883, v. 17, pp. 80–82.

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2133. [RILEY, C. V.] Naphthaline cones. <Amer. Nat., [5] January, 1883, v. 17, pp. 83, 84.

The cones stain the paper lining of boxes; they seem to destroy mites and *Psoci* very soon, but have little effect on *Dermestidæ.*

2134. RILEY, C. V. Emulsions of petroleum as insecticides. <Sci. Amer., 6 January, 1883 [v. 62], n. s., v. 48, p. 3. S.-b., No. 42, pp. 4–7.

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1. A new enemy to wax-beans; extract from letter of G. H. Stone, on the food-plants, habits, and ravages of *Epilachna corrupta;* distribution of the same. 2. Spread of the 12-punctured asparagus beetle; increasing noxiousness of *Crioceris 12-punctata* recorded from near Baltimore, Md., by O. Lugger; comparative description of this species with *C. asparagi.* 3. An internal mite in fowls; presence of *Cytoleichus sarcoptoides* in lungs and other parts of diseased chickens.

2136. [RILEY, C. V.] The "lignified snake of Brazil." <Evening Star [Washington, D. C.], 20 January, 1883, v. 61, p. 2. S.-b. No. 42, pp. 59–60. Reprint: <Sci. Amer. Suppl., 17 February, 1883. See: <Science, 23 February, 1883, v. 1, p. 84.

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Phylloxera vastatrix in California is most injurious in moist soils.

2141. RILEY, C. V. The hibernation of *Aletia xylina* [Say] in the United States a settled fact. <Sci. Amer., 3 February, 1883, v. 48, p. 68. S.-b. No. 42, pp. 66–67. Reprint: <Proc. Amer. Assoc. Adv. Sci. for 1882, 1883, v. 31, pp. 468–469. Separate: <Salem, Mass., July, 1883, pp. 468–469. Abstract: <Amer. Nat., April [15 March], 1883, v. 17, pp. 420–421. <Nature, 28 December, 1882, v. 27, p. 214.

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2143. [RILEY, C. V.] Diseases of the chinch-bug. <Rural New-Yorker, 17 February, 1883. S.-b. No. 42, p. 58.

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2144. R[ILEY], C. V. [Instinct of *Cicada* [= *Tibicen*] *septendecim.*] <Amer. Nat., March [21 February], 1883, v. 17, p. 322.

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2145. [RILEY, C. V.] Food-habits of *Megilla maculata*. <Amer. Nat., March [21 February], 1883, v. 17, pp. 322–323.

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2146. [RILEY, C. V.] Clothes-moths observed in the United States. <Amer. Nat., March [21 February], 1883, v. 17, p. 323.

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2148. RILEY, C. V. Notice of an illustrated essay on the *Noctuidæ* of North America. <Bull. Brooklyn Ent. Soc., February, 1883, v. 5, pp. 77–79. Separate: <[Brooklyn, N. Y., 1883], 4 pp.

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2149. RILEY, C. V. Concerning canker-worms. <Indiana Farmer, 3 March, 1883. S.-b. No. 56, p. 69. <Prairie Farmer, 3 March, 1883. S.-b. No. 56, p. 69. <Pacific Rural Press, 10 March, 1883. S.-b. No. 54, p. 15. <Lancaster Farmer, March, 1883. S.-b. No. 56, p. 72. <Gardener's Mo. and Hortic., April, 1883, v. 25. S.-b. No. 42*a*, p. 631.

Description of *Paleacrita vernata* and *Anisopteryx pometaria;* ravages of the former; request for information; method of observation.

2150. RILEY, C. V. Dipterous enemies of the *Phylloxera vastatrix.* <Ca. Ent., February [9 March], 1883, v. 15, p. 39.

Critical review of paper of T. W. Fyles; the characters given of *Diplosis grassator* are insufficient to distinguish the species; galls of *Phylloxera vastatrix* inhabited by *Leucopis phylloxeræ* Riley MS.; comparison of the early stages of these two Diptera.

2151. [RILEY, C. V.] The food relations of the *Carabidæ* and *Coccinellidæ.* <Amer. Nat., April [15 March], 1883, v. 17, pp. 417–419.

Summary of S. A. Forbes's observations on the food relations of the *Carabidæ* and *Coccinellidæ.*

2152. [RILEY, C. V.] Relations of the *Carabidæ* and *Coccinellidæ* to birds. <Amer. Nat., April [15 March], 1883, v. 17, p. 419.

Reprint of S. A. Forbes's summary, with note; *Coccinellidæ* not eaten by birds; *Carabidæ* eaten in proportion as they have phytophagous habits.

2153. [RILEY, C. V.] Viviparity in a moth. <Amer. Nat., April [15 March], 1883, v. 17, p. 420.

Notes Fritz Müller's discovery of a moth seen to deposit living larvæ.

2154. [RILEY, C. V.] Damage to silver-plate by insects. <Amer. Nat., April [15 March], 1883, v. 17, p. 420.

Holes in silver-plate said to have been made by *Niptus hololeucus.*

2155. RILEY, C. V. Possible food-plants of the cotton-worm. <Amer. Nat., April [15 March], 1883, v. 17, pp. 421–422.

Notice of paper of J. S. Bailey; occurrence of newly issued imagos of *Aletia xylina* at Karner, N. Y., 7 and 8 October, 1882, proving that the larva of this insect feeds upon some genus of plants other than *Gossypium.*

2156. [RILEY, C. V.] *Agrotis messoria* Harr. *vs. Agrotis scandens* Riley. <Amer. Nat., April [15 March], 1883, v. 17, p. 422, 2 figs.

Critical review of views of A. R. Grote; *Agrotis lycarum, A. repentis,* and *A. cochranii* = *A. messoria*; *A. scandens* is a distinct species; comparison of the imagos; figures larvæ and imagos of the two species.

2157. [RILEY, C. V.] An internal mite in fowls. <Amer. Nat., April [15 March], 1883, v. 17, pp. 422–423.

Lungs, bronchia, and linings of thoracic and abdominal cavities of a sick chicken covered with *Cytoleichus sarcoptoides* Mégnin; habitat of the same in fowls in Europe; diseases caused by it.

2158. [RILEY, C. V.] Prevalence of the screw-worm in Central America. <Amer. Nat., April [15 March], 1883, v. 17, p. 423.

Extract from letter of J. C. Zeledon on the abundance and ravages of *Lucilia macellaria* and related flies in Costa Rica.

2159. R[ILEY], C. V. Dried leaves as food for lepidopterous larvæ. <Amer. Nat., April [15 March], 1883, v. 17, pp. 423–424.

Review of paper of A. H. Mundt; larvæ successfully fed upon fresh leaves transported from a distance under pressure; chopping the leaves would possibly permit of more rapid curing and more convenient packing.

2160. [RILEY, C. V.] Lepidopterological notes. <Amer. Nat., April [15 March], 1883, v. 17, p. 424.

Duplication of descriptions of the early stages of Lepidoptera to be avoided; notice of Mrs. C. H. Fernald's list of *Noctuidæ* taken in Orono, Me.

2161. [RILEY, C. V.] Obituary. <Amer. Nat., April [15 March], 1883, v. 17, p. 424.

Obituary notices of G. W. Belfrage and F. W. Mæklin.

2162. R[ILEY], C. V. Mosquitoes *vs.* malaria. <Sci. Amer., 14 April, 1883, v. 48, pp. 224–225. S.-b. No. 42, pp. 63–64; No. 67, p. 8. Abstract: <Amer. Nat., May [18 April], 1883, v. 17, p. 549.

Criticism of the views of Dr. A. F. A. King in support of the thesis that malarial disease is the result of inoculation of the body with malarial poison by the bites of insects; citation of twenty correspondencies in the conditions affecting the prevalence of mosquitoes [*Culicidæ*] and malarial disease.

2163. RILEY, C. V. Jumping seeds and galls. <Sci. Amer., 14 April, 1883, v. 48, p. 228, fig. S.-b. No. 42, pp. 61–63; No. 67, p. 2.

Figures of larva, pupa, and imago of *Carpocapsa saltitans*, with figures and description of seeds inhabited by the larva of this moth, and description of the plant bearing these seeds; vernacular names of plant and insect; movements imparted to the seeds by the insects and by *Cynips q.-saltatorius* to the galls of the same.

2164. RILEY, C. V. Reports of experiments, chiefly with kerosene, upon the insects injuriously affecting the orange-tree and the cotton-plant, made under the direction of the entomologist. <Bull. No. 1, Div. Ent. U. S. Dept. Agric., [17 April], 1883, 62. pp.

CONTENTS.

Letter of submittal 3
Introduction 5
Miscellaneous notes on orange insects. By H. G. Hubbard 9
Experiments upon scale insects affecting the orange. By Jos. Voyle.. 19
Report of observations and experiments. By J. C. Neal 31
Report of observations and experiments on the cotton-worm (*Aletia xylina*). By R. W. Jones 47
Report upon the cotton-worm, boll-worm, and other insects. By Lawrence Johnson 53
Index 59

2165. RILEY, C. V. Reports of observations on the Rocky Mountain locust and the chinch-bug, together with extracts from the correspondence of the division on miscellaneous insects. <Bull. No. 2, Div. Ent. U. S. Dept. Agric., [17 April], 1883, 36. pp. Second edition, 16 September, 1883.

CONTENTS.

Letter of submittal 3
Introduction 5
Report of observations in the Northwest on the Rocky Mountain locust, by Lawrence Bruner 7
Experiments on chinch-bugs. By S. A. Forbes 23
Extracts from correspondence 27
Index 35

2166. [RILEY, C. V.] Insects as food for man. <Amer. Nat., May [18 April], 1883, v. 17, pp. 546–547.

Summary of Max Buchner's observations on the insects used as food by the Bantus tribe of negroes.

2167. RILEY, C. V. Number of molts and length of larval life as influenced by food. <Amer. Nat., May [18 April], 1883, v. 17, pp. 547–548.

Variability in habits and characters of insects; periods and number of molts observed in larvæ of *Tenebrio molitor*, *T. obscurus* and *Trogoderma tarsale*; conclusion that insufficient food retards development and occasions frequent molting.

2168. [RILEY, C. V.] Entomological notes. <Amer. Nat., May [18 April], 1883, v. 17, pp. 549–550.

Brief notes on recent publications.

2169. RILEY, C. V. Larval stages and habits of the bee-fly *Hirmoneura*. <Science, 27 April, 1883, v. 1, pp. 332–334, figs. 1–3. S.-b. No. 42, p. 52.

Summary of the life-history of *Hirmoneura obscura* condensed from Handlirsch, and from Brauer; figures the several stages; correspondences of the structure and early history of the larva; predictions in reference to the larvæ of *Bombyliidæ*.

2170. RILEY, C. V. The capitalizing of specific names. <Papilio, March [April], 1883, v. 3, p. 62.

Inquiry as to the use and purpose of capitalizing specific names.. See No. 2257.

2171. RILEY, C. V. Observations on the fertilization of Yucca and on structural and anatomical peculiarities in Pronuba and Prodoxus. <Gardener's Mo. and Hortic. April, 1883, v. 25, pp. 118–119. S.-b. No. 51, p. 122½. Reprint: <Proc. Amer. Assoc. Adv. Sci. for 1882, 1883, v. 31, pp. 467–468. Separate: <Salem. Mass., July, 1883, pp. 467–468. Abstract: <Amer. Nat., February [31 January], 1883, v. 17, p. 197.

Description of the manner in which *Pronuba yuccasella* gathers the pollen in flowers of *Yucca*; the work of this species necessary for the fertilization of the capsular species of *Yucca*, the irregularity of whose fruit is due to its punctures; description of the egg and of the manner of oviposition of this species.

2172. RILEY, C. V. The potato-stalk borer. <Rural New Yorker, 12 May 1883. S.-b. No. 42*a*, p. 213.

Answer to inquiry; life-history and means against *Baridius* [= *Trichobaris*] *trinotata*.

2173. RILEY, C. V. Jumping seeds and galls. <Proc. U. S. Nat. Mus., 12 May, 1883, v. 5, pp. 632–635, fig. Separate: <[Washington, 1884], pp. 632–635, fig.

Description of seeds of "arrow-weed"; their motions caused by larvæ of *Carpocapsa saltitans*; figures of the seeds and of the larva, pupa, and imago of the *Carpocapsa*; habits and seasons of the same; description of the plant bearing these seeds; character and motions of the gall of *Cynips q.-saltatorius*.

2174. RILEY, C. V. Note on cluster-flies. <Proc U. S. Nat. Mus., 12 May, 1883, v. 5, pp. 636–637.

Habits of *Pollenia rudis*; notice of recorded cases of swarming among the Diptera. See No. 2128.

2175. [RILEY, C. V.] The new classification of the Coleoptera of North America. <Amer. Nat., June [17 May], 1883, v. 17, pp. 660–661.

Notice of work of J. L. Leconte and G. H. Horn.

2176. RILEY, C. V. A pretty and unique gall-making tortricid. <Amer. Nat., June [17 May], 1883, v. 17, p. 661, fig. 1.

Description and figure of imago of *Grapholitha ninana* n. sp. reared from galls on stems of *Acacia filicina* in Arizona.

2177. [RILEY, C. V.] Simulium feeding on other insects. <Amer. Nat., June [17 May], 1883, v. 17, pp. 661–662.

Comment on note of H. A. Hagen.

2178. [RILEY, C. V.] Synopsis of the N. A. *Heliothinæ*. <Amer. Nat., June [17 May], 1883, v. 17, pp. 662–663.

Review of paper of J. B. Smith; nature of the generic characters of *Noctuidæ*.

2179 [RILEY, C. V.] Death of Professor Zeller. <Amer. Nat., June [17 May], 1883, v. 17, p. 663.

Obituary notice of P. C. Zeller.

2180. [RILEY, C. V.] Protection of insect collections. <Amer. Nat., June [17 May], 1883, v. 17, pp. 663–664.

Power of the larvæ of *Dermestidæ* to endure the effects of certain insecticides; prerequisites more important than insecticides; seasons when collections are most endangered.

2181. [RILEY, C. V.] Cocoon of *Telea polyphemus*. <Amer. Nat., June [17 May], 1883, v. 17, p. 664.

Answer to inquiry of H. Morris; cocoon of *Telea polyphemus* usually falls to the ground with the leaves, yet quite frequently it is attached to twigs and does not fall to the ground.

2182. [RILEY, C. V.] The sucking organs of bees, wasps, and flies. <Amer. Nat., June [17 May], 1883, v. 17, pp. 664–665.

Notice of paper of K. Kraepelin.

2183. [RILEY, C. V.] The "pine moth of Nantucket." <Amer. Nat., June [17 May], 1883, v. 17, pp. 665–666.

Critical review of paper of S. H. Scudder.

2184. [RILEY, C. V.] Entomological notes. <Amer. Nat., June [17 May], 1883, v. 17, pp. 666–667.

Brief notes on recent publications.

2185. RILEY, C. V. Elephantiasis or Filaria disease. <Science, 18 May, 1883, v. 1, pp. 419–421, fig. S.-b. No. 42, p. 51, fig.

Criticism of the views of Dr. A. F. A. King; notice of the writings of P. Manson and others on the connection of *Culex musquito* with the life-history of *Filaria sanguinis-hominis* and on the production of elephantiasis and related diseases by *Filaria*.

2186. RILEY, C. V. *Nemestrinidæ*. <Science, 8 June, 1883, v. 1, p. 513.

Note on papers concerning *Nemestrinidæ*; supplementary to No. 2169.

2187. RILEY, C. V. The corn-root *Diabrotica*. <Rural New-Yorker, 9 June, 1883. S.-b. No. 54, p. 42.

Increasing distribution of *Diabrotica longicornis*; means against it.

2188. RILEY, C. V. Elm-leaf beetle. <Sci. Amer., 16 June, 1883, v. 48. S.-b. No. 42*a*, p. 265.

Reply to inquiries concerning *Galeruca xanthomelæna*.

2189. RILEY, C. V. A unique and beautiful noctuid. <Amer. Nat., July [20 June], 1883, v. 17, pp. 788–790, fig.

Figure of imago of *Cirrhophanus triangulifer*; description of its generic characters; its affinities, synonyms, and probable habits.

2190. [RILEY, C. V.] Insects affecting stored rice. <Amer. Nat., July [20 June], 1883, v. 17, p. 790.

Lists of insects, chiefly Coleoptera, found in a lot of damaged rice from the Chinese centennial exhibit; two species are carnivorous.

2191. RILEY, C. V. Hypermetamorphoses of the *Meloidæ*. <Amer. Nat., July [20 June], 1883, v. 17, pp. 790–791.

Proposal of simpler and more natural terms to designate the stages of development of larvæ of *Meloidæ*.

2192. [RILEY, C. V.] Entomological notes. <Amer. Nat., July [20 June], 1883, v. 17, pp. 792–793.

Comments on recent entomological publications; items of news.

2193. RILEY, C. V. The grape Phylloxera in France. <Science, 22 June, 1883, v. 1, pp. 576–578.

Review and criticism of the report of the *Commission supérieure du Phylloxera*.

2194. RILEY, C. V. Fig insects. <Science, 29 June, 1883, v. 1, p. 599.

Review of S. S. Saunders's views on fig insects.

2195. RILEY, C. V. Egg-punctures on raspberry- and grape-vines, etc. <Rural New-Yorker, 30 June, 1883, v. 42, p. —. S.-b. No. 42, p. 56.

Answer to inquiry of T. H. G.; oviposition of *Œcanthus niveus* in stems of raspberry- and grape-vines, and of *Ceresa bubalus* in twigs of apple-trees; habits and ravages of and means against the former; the latter seldom very injurious.

2196. RILEY, C. V. Silk culture in the United States. <Rural New-Yorker, 14 July, 1883, v. 42, p. —. S.-b. No. 42*a*, p. 531.

Revival of interest in silk culture in the United States; experience of the year; relation of silk culture to import duties; warning against too high expectations as to profits; notes on manuals of silk culture.

2197. RILEY, C. V. Economic entomology of Iowa. <Sci. Amer., 14 July, 1883, v. 49, p. —. S.-b. No. 53, p. 147.

Review of work done in Iowa, especially of papers of J. N. Dixon, H. Osborn, and A. B. Walton.

2198. [RILEY, C. V.] Insect plagues. <Boston Herald, 22 July, 1883, p. —. S.-b. No. 42, pp. 53–54; No. 67, p. 11. Extract: <Mirror and Farmer, 26 July, 1883, v. 35. S.-b. No. 42, pp. 126–127.

Newspaper interview; seasons, habits, ravages of and means against *Caloptenus atlanis*, *Nematus erichsonii*, and *Orgyia leucostigma*.

2199. RILEY, C. V. Report by C. V. Riley. <Proc. U. S. Nat. Mus., 27 July, 1883, v. 6, pp. 104–105. Reprint: <Sci. Amer. Suppl., 13 October, 1883, v. 16, p. 6486.

Note to F. Humbert's *Lucilia macellaria* infesting man; references to other mentions of it; its distribution and means against it.

2200. RILEY, C. V. Emulsions of petroleum and their value as insecticides. <Proc. Amer. Assoc. Adv. Sci. for 1882, 1883, v. 31, pp. 469–470. Separate: <Salem, Mass., July, 1883, pp. 469–470. Reprint: <Kansas City Rev. of Science and Industry, November, 1883, v. 7, pp. 447–448. S.-b. No. 42, p. 124. Extract: <Sci. Amer., 19 November, 1883, v. 49, p. 294. S.-b. No. 51, p. 153.

Description of modes of making emulsions of petroleum for use against insects.

2201. [RILEY, C. V.] The old, old question of species. <Amer. Nat., September [15 August], 1883, v. 17, p. 975.

Comments upon the discussion between H. A. Hagen and W. H. Edwards; views of both parties extreme; views as to the true nature of species.

2202. [RILEY, C. V.] *Myrmecophila.* <Amer. Nat., September [15 August], 1883, v. 17, pp. 975–976.

Record of recent captures of *Myrmecophila* in Oregon and District of Columbia; record of former captures in the United States; habits of the genus.

2203. [RILEY, C. V.] Salt-water insects used as food. <Amer. Nat., September [15 August], 1883, v. 17, pp. 976–977.

Occurrence of *Ephydra* (*hians* ?) in Lake Tetscoco, Mexico; *E. gracilis* found in Great Salt Lake, Utah, and *E. californica* in lakes in California; account by W. H. Brewer of the manner in which the last-named species is collected and used for food by the Indians living near Mono Lake.

2204. [RILEY, C. V.] Food-plants of *Samia cynthia.* <Amer. Nat., September [15 August], 1883, v. 17, p. 977.

Review of paper of H. H. Birney; list of plants on which *Samia* [= *Attacus*] *cynthia* has hitherto been found feeding; some of these are the favorite food-plants of *Callosamia* [= *Attacus*] *promethea.*

2205. [RILEY, C. V.] Bitten by an aphid? <Amer. Nat., September [15 August], 1883, v. 17, p. 977.

Letter of S. Swan, with answer; *Siphonophora* [= *Nectarophora*] *rudbeckiæ* common on *Solidago* and *Rudbeckia*; the biting was probably caused by ants or some other insect that escaped notice at the time.

2206. RILEY, C. V. *Steganoptycha claypoleana.* <Amer. Nat., September [15 August], 1883, v. 17, p. 978. Reprint: <Papilio, September–December, 1883, v. 3, p. 191.

Comparative description of *Steganoptycha claypoleana* with *Proteoteras æsculanum*; habits of the former.

2207. R[ILEY], C. V. Extermination and restriction of Phylloxera in Switzerland. <Rural New-Yorker, 25 August, 1883, v. 42. S.-b. No. 49, p. 74.

Notice of report of Valery-Mayet.

2208. RILEY, C. V. Hackberry psyllid galls. <Ca. Ent., August [5 September], 1883, v. 15, pp. 157–159, figs. 6, 7.

Critical review of paper of T. W. Fyles; *Phylloxera vastatrix* has many parasites and *Celtis* is attacked by many species of gall-insects; characters of *Pachypsylla* n. g. [p. 157]; figures of galls of *P. celtidis-venusta* and *P. c.-mamma*; derivation and orthography of the generic term *Celtis.*

2209. RILEY, C.V. Some recent discoveries in reference to Phylloxera. <Science, 7 September, 1883, v. 2, p. 336. S.-b. No. 42, pp. 68, 69. Reprint: <Proc. Amer. Assoc. Adv. Sci. for 1883, 1884, v. 32, p. 320. Separate: <Salem, Mass., July, 1884, p. 320. <Amer. Nat., December [28 November], 1883, v. 17, p. 1288.

Summary of the cycle of development of the genus *Phylloxera*; character of the gall of *P. spinosa* and location of the impregnated egg of the species.

2210. RILEY, C. V. The *Psyllidæ* of the United States. <Science, 7 September, 1883, v. 2, p. 337. S.-b. No. 42, pp. 67–68. Reprint: <Proc. Amer. Assoc. Adv. Sci. for 1883, 1884, v. 32, p. 319. Separate: <Salem, Mass., July, 1884, p. 319.

Characteristics and economic importance of *Psyllidæ*; status of the present knowledge of this family in the United States; list of new genera and species; food-plants of the same; characteristics of the eggs and young of *Psyllidæ*.

2211. RILEY, C. V. Improved method of spraying trees for protection against insects. <Science, 14 September, 1883, v. 2, p. 378. S.-b. No. 42, p. 68. Reprint: <Proc. Amer. Asoc. Adv. Sci. for 1883, 1884, v. 32, pp. 466–467. Separate: <Salem, Mass., July, 1884, pp. 466, 467.

Description of apparatus, especially of "cyclone nozzle" and adjustable hose; mention of insecticide substances.

NOTE.—Nos. 2209–2211 were issued as a separate, Salem, 1884.

2212. [RILEY, C. V.] Entomology at Minneapolis. <Amer. Nat., 1883, v. 17: October [17 September], pp. 1068–1070; November [19 October], pp. 1169–1174.

Minutes of the meetings of the entomologists at the session of the American Association for the Advancement of Science; reorganization of the entomological club; election of officers and change in the constitution; abstracts of papers read.

2213. RILEY, C. V. Notes on *Pœdisca scudderiana*. <Amer. Nat., October [17 September], 1883, v. 17, pp. 1069–1070.

Habits and variation of *Pœdisca scudderiana*; difference between the gall of this insect and that of *Gelechia gallæsolidaginis*.

2214. RILEY, C. V. A myrmecophilous lepidopteron. <Amer. Nat., October [17 September], 1883, v. 17, p. 1070.

Larva of *Helia americalis* found in nests of *Formica rufa*; this species the only one of the Lepidoptera known to develop in ants' nests.

2215. [RILEY, C. V.] Enemies of the egg-plant. <Amer. Nat., October [17 September], 1883, v. 17, p. 1070.

Extract from a letter of A. Œmler, proving that the occurrence of *Cassida texana* and *Doryphora juncta* on *Solanum melongena* is not accidental or temporary.

2216. [RILEY, C. V.] The periodical Cicada in southeastern Massachusetts. <Amer. Nat., October [17 September], 1883, v. 17, p. 1071.

Note to paper of C. E. Bessey; *Cicada* [= *Tibicen*] *septendecim* at Martha's Vineyard, Mass., in June, 1883, the precursor to *septendecim* Brood XXI which will appear in North Carolina and Virginia as well as Martha's Vineyard in 1884; accelerated specimens of the same brood received from Loudoun County, Va., recently.

2217. Riley, C. V. Habits of *Murmidius.* <Amer. Nat., October [17 September], 1883, v. 17, p. 1071.

List of insects found in a lot of damaged rice from South America; occurrence of *Murmidius ovalis* in vast numbers in this rice; its probable food-habits; description of its cocoon; list of families of beetles some of whose larvæ spin cocoons; habitat of *Mychocerus.*

2218. [Riley, C. V.] Obituary. <Amer. Nat., October [17 September], 1883, v. 17, p. 1072.

Notices of V. T. Chambers and Townend Glover.

2219. [Riley, C. V.] Entomological notes. <Amer. Nat., October [17 September], 1883, v. 17, pp. 1072–1073.

Notes on recent entomological publications; items of news.

2220. [Riley, C. V.] Economic notes. <Amer. Nat., October [17 September], 1883, v. 17, pp. 1073–1074.

Comments on the ravages of several injurious insects during the past season.

2221. Riley, C. V. A parasite of the cabbage-worm. <Rural New-Yorker, 6 October, 1883, v. 42. S.-b. No. 42, p. 58.

Answer to letter of J. H. B.; parasitism of *Pteromalus puparum* in larvæ and pupæ of *Pieris rapæ.*

2222. Riley, C. V. The handmaid moth. <Rural New Yorker, 13 October, 1883, v. 42. S.-b. No. 42, p. 77.

Answer to inquiry of H. B. S.; description of larva, pupa, and imago of *Datana ministra* from hickory- and walnut-trees, and of a phytophagic variety of the larva from apple and other trees; habits of the larvæ; the larvæ unusually abundant in 1883.

2223. Riley, C. V. Remarks on *Arzama obliquata.* <Amer. Nat., November [19 October], 1883, v. 17, p. 1169.

Description of the egg-mass of *Arzama obliquata*; colors and habitat of the larva; variations of the imago; number of annual broods.

2224. [Riley, C. V.] Rare monstrosities. <Amer. Nat., November [19 October], 1883, v. 17, p. 1175.

Notice of monstrosities recorded in *Melanippe montanata* and *Zygæna minos.*

2225. [Riley, C. V.] The nervous system of insects. <Amer. Nat., November [19 October], 1883, v. 17, pp. 1175–1176.

Summary of the observations of Ed. Brandt.

2226. [Riley, C. V.] *Hymenorus rufipes* as a myrmecophilous species. <Amer. Nat., November [19 October], 1883, v. 17, p. 1176.

Imagos of *Hymenorus rufipes* raised from larvæ found in nests of *Formica fusca*; character of the nests of the *Formica*; food-habits of the *Hymenorus* unknown.

2227. [Riley, C. V.] Recent publications. <Amer. Nat., November [19 October], 1883, v. 17, p. 1177.

Notice of J. H. Comstock's work on *Diaspinæ* and of other recent publications.

2228. [Riley, C. V.] Entomological notes. <Amer. Nat., November [19 October], 1883, v. 17, pp. 1177–1179.

Review of "General Index of the Entomological Reports of the Province of Ontario;" recent publications and items of news.

2229. Riley, C. V. The potato-stalk borer. <Rural New-Yorker, 20 October, 1883. S.-b. No. 42, pp. 78–79.

Answer to letter of S. C. R.; description, habits of, and means against *Gortyna nitela*; means against *Paria aterrima, Graphops pubescens,* and other larvæ of *Chrysomelidæ* injurious to the roots of strawberry-plants.

2230. [Riley, C. V.] Recent advances in horticultural entomology. <Rural New-Yorker, 20 October, 1883, v. 42. S.-b. No. 42, pp. 79–81. Reprint: <Proc. 19th Sess. Amer. Pomol. Soc., 1884, p. 45. <Trans. Wisc. State Hortic. Soc., 1886, v. 17, p. —.

Report of address delivered; discussion of measures recommended for adoption to prevent the ravages of insects injurious to horticulture, especially of *Carpocapsa pomonella* and *Conotrachelus nenuphar*; correction of statements in regard to the oviposition of *Saperda bivittata* [= *candida*] and ? *Bembex marginata*; advance in knowledge of the life-history of *Aphididæ* and in the development of machinery for the application of poison sprays to plants; relative value of the principal insecticides.

2231. Riley, C. V. On a gall-making genus of *Apioninæ*. <Bull. Brooklyn Ent. Soc., October, 1883, v. 6, pp. 61–62. Separate: <Brooklyn, N. Y., 1883, 2 pp.

List of North American gall-making Coleoptera; description of *Podapion* n. g. [p. 62] and of the gall and imago of *P. gallicola* n. sp., found on twigs of *Pinus inops*; probable life-habits, inquilines, and parasite of this species.

2232. Riley, C. V. Report of the Entomologist. <Ann. Rept. [U. S.] Commissioner Agric. for 1883, pp. 99–180, 13 pl. Separate: <Washington, 31 October, 1883, pp. 5+pp. 99–180+pp. 7, 13 pl.

TABLE OF CONTENTS.

Introduction 99

Scope and limitations, 99—Cabbage insects, 99—Lesser locust, 99—Protection of fruit and shade trees, 99—Office force, assistants and agents, 99—Observations and report on insects injurious to forest-trees, by Dr. A. S. Packard, jr., 99—Special report on insects affecting the orange, by H. G. Hubbard, 99—Work of agents, 100—Monographs in preparation, 100—Commission sent to Brazil to study certain insects, 100—Publication of third report of the United States Entomological Commission, 100—Publication of special bulletins, 100—Correspondence and work of the division, 101—The illustrations to the report, 101.

Silk-worm notes 101

Legislation, 101—California State Board of Silk Culture, 101—Premiums offered in California, 101—Home culture, 102—Guaranty of egg supply, 102—Woman's Silk Culture Association of California, 102—California Silk Culture Association, 102—Reports from correspondents of the division, 102–104—Issue of "Silk Culture Directory," 104—Establishment of school in New Jersey, 105—Organization of Southern Silk Industrial Association, 105—A new machine patented, 105—Report on the future of silk culture in the United States, by United States Consul Peixotto, of Lyons, France, 105—Silk culture by the Mennonites, 106—Work at the Department, 106.

2232. RILEY, C. V.—Continued.

CABBAGE WORMS 107

Interest in and importance of the subject, 107—Accurate estimate of loss impossible, 107.

Imported cabbage-worm, *Pieris rapæ* 108

History of its spread, 108—Ravages, 109—Characters, 110—Habits, 110—Food-plants, 111—Seasons of appearance, 111—Natural enemies, 111.

Southern cabbage-butterfly, *Pieris protodice* 114

Range, 114—Ravages, 114—Characters, 114—Food-plants, 115—Parasites, 115.

The potherb-butterfly, *Pieris oleracea* 115

Range, 115—Characters, 116—Habits, 116—Number of broods, 116—Food-plants, 117—Enemies, 117.

The larger cabbage-butterfly, *Pieris monuste* 117

Range, 117—Characters, 117—Food-plants, 118—Parasites, 118—Description of early states, 118.

The cabbage plusia, *Plusia brassicæ* 119

Its range, 119—Food-plants, 119—Habits and natural history, 119—Close relation to an European species, 120—Natural enemies, 120—*Botrytis rileyi*, a new species of fungus, 121—Remedies, 121.

The cabbage mamestra, *Mamestra trifolii* 123

Its habits and natural history, 123—Remedies, 124—Description, 124.

The zebra cabbage-worm *Mamestra picta* 124

History, 124—Description, 125—Habits, 125—Broods, 125—Remedies, 125.

The cabbage pionea *Pionea rimosalis* 126

Its past history, 126—Notes by Prof. Cyrus Thomas, 126—Habits and natural history, 127—Parasites, 127—Remedies, 127—Descriptive, 128.

The cauliflower botis, *Botis repetitalis* 128

Past history, 128—Range, 128—Descriptive, 129.

The cabbage plutella, *Plutella cruciferarum* 129

Its past history, 129—Habits and natural history, 130.

REMEDIES FOR CABBAGE-WORMS 131

Hot water, 131—Pyrethrum, 131—Kerosene emulsions, 131—Other substances, 131—Paris green, London purple, and white hellebore, 132—Preventive measures, 132—Report of Capt. R. S. Lacey, 133—Report of Col. Wright Rives, 134—Poisoning devices, 136.

CAUSES OF DESTRUCTION OF EVERGREEN FORESTS IN NEW ENGLAND AND NEW YORK, BY A. S. PACKARD, JR 138

The larch saw-fly, *Nematus erichsonii* 138

History of its ravages, 138—Its devastations in Maine, 139—Its ravages in New Hampshire, 141—Its appearance in Massachusetts, 141—In northern New York, 142—History of the species and its habits, 142—Description of egg, larva, cocoon, and imago, 145—Remedies, 146—Parasites, 146.

The spruce-bud tortrix, *Tortrix fumiferana* 146

Its ravages in Maine, 146—Habits and transformations, 147—Description of different stages, 148.

The spruce nematus, *Nematus integer* 149

Range, 149—Description of different stages, 150.

2232. **Riley, C. V.**—Continued.

CAUSES OF DESTRUCTION OF EVERGREEN FORESTS, ETC.—Continued.

The hemlock gelechia, *Gelechia abietisella* 150

Habits, 151—Description of larva, pupa, and moth, 151.

EXPERIMENTS ON SCALE INSECTS, WITH PRACTICAL SUGGESTIONS, BY H. G. HUBBARD 152

Report of progress in experiments, 152—Soap emulsions, 152—Kerosene and soap emulsions, formula, 152—Receipt for making emulsions of kerosene and soap, 152—Introduction and use of the cyclone nozzle, 152—Effects of kerosene emulsions upon plants, 153—Effects of kerosene emulsions varied by change of weather, 153—Most favorable season for applying kerosene emulsions, 153—Application of liquid insecticides, 153—The cyclone nozzle, 154—Cost of kerosene wash, 154.

Recent experiments 155

Potash compared with soda as an insecticide, 155—Details of experiments with potash, 155–156—Experiments with soda, 156.

Introduction and spread of scale insects 156

Great vitality of bark-lice, 156—Importation on live trees, 157—Precautionary measures; infection from nursery stock, 157—Protection afforded by hedges and forest trees, 158.

MISCELLANEOUS INSECTS 159

The imported elm-leaf beetle, *Galeruca xanthomelæna* 159

Range, 159—An importation from Europe, 160—Habits and natural history, 160—Remedies, 161—Natural enemies, 163—More recent experiments at the Department, 164—Past history of the elms on Department grounds, 164—Condition and characteristics of the grove in 1882 and 1883, 164—Extent of injury in 1882 and 1883, 164—Preferences of the elm-beetle for certain varieties and species of elms, 165—Effects of arsenical poisons on insect and plant, 165—Preventive effects of the poison, when best applied, 166—Treatment with London purple, 166—Preparation of the poison, 166—Effects of the mixture, 167—Treatment with Paris green, 167—Mechanical means of applying the poison, 168—The eddy-chamber nozzle, 168—Hose and bamboo combination, 169.

The lesser migratory locust, *Caloptenus atlanis* 170

Its ravages in the Merrimac Valley, 170—Historical, 170—Characters, 172—Range and life-history, 173—Natural enemies, 174—Remedies, 175—Destruction of eggs, 175—Destruction of young, 175—Coal oil, 175—Machines, 175–177—Coal tar, 177—Catching or bagging, 178—Protection of vegetable gardens, 179—Necessity for co-operation, 180.

2233. **Riley, C. V.** The imported orchard *Scolytus* (*Scolytus rugulosus* Ratz.). <Thomasville [Ga.] Times, 10 November, 1883. S.-b. No. 56, p. 182.

Answer to inquiry; *S. rugulosus* bores in twigs of pear; means against it.

2234. **Riley, C. V.** Osage orange *vs.* mulberry for the silk-worm. <Sci. Amer., 17 November, 1883, v. 49, p. 305. S.-b. No. 42, p. 91. Reprint: <Amer. Nat., 5 January, 1884, v. 18, pp. 78–79. <Prairie Farmer, 22 March, 1884, v. 56, p. 187. S.-b. No. 42, p. 118.

Comparative value of leaves of *Maclura aurantiaca* and of *Morus* as food for *Sericaria mori*; critical review of V. des Lauriers's conclusions.

2235. Riley, C. V. Entomological notes of the year. <Prairie Farmer, 24 November, 1883, v. 55. S.-b. No. 42, pp. 86–87.

Progress of experiments for the destruction of scale insects, *Coccidæ*; introduction of *Aspidiotus rapax* into California on apples from New Zealand; strawberries injured by *Capsus oblineatus* [= *Lygus pratensis*] and a myriapod in Illinois; occurrence of *Leucania unipuncta* in several places, and of *Cecidomyia destructor* in Illinois; extension of culture of *Pyrethrum cinerariæfolium* in California; occurrence of *Anarsia lineatella* on strawberry-plants in Illinois; of *Doryphora juncta* and *Cassida texana* on *Solanum melongena* in Georgia; of *Ceresa bubalus* on potato-plants in Pennsylvania; of *Epilachna corrupta* on wax-beans, etc.

2236. Riley, C. V. A satisfactory remedy for melon bugs, flea-beetles, etc. <Rural New-Yorker, 3 November, 1883, v. 42. S.-b. No. 42, pp. 77–78.

Quinn's method of sprinkling the vines with a mixture of tobacco water and soft soap and then powdering with lime is probably the best general preventive against *Diabrotica vittata* and *Halticidæ*; description of J. M. Nicholson's siphon arrangement by which to keep the vines constantly moist with the liquid.

2237. Riley, C. V. The chinch-bug in New York. <Science, 9 November, 1883, v. 2, p. 621. Extract: <Sci. Amer., 22 December, 1883, v. 49, p. 384. S.-b. No. 42, pp. 122–123.

Present outbreak of *Blissus leucopterus* in New York the result of an increase due to favorable conditions rather than an invasion.

2238. R[iley], C. V. Insects in relation to agriculture. <Stoddart's Encylopædia Americana, 1883, v. 1, pp. 135–142, figs. 1–29.

Chapter 9 of article "Agriculture." Brief accounts with numerous illustrations of the insects named below, and of means against them, with cross-references to accounts of other insects in other portions of the work. The headings and subjects of the sub-chapters are as follows:

Importance of economic entomology 135

Insects injurious to fruit and fruit trees:

Apple curculio (The), *Anthonomus quadrigibbus* Say, p. 135, fig. 1—Apple-maggot (The), or "railroad-worm," *Trypeta pomonella* Walsh, p. 135—White-marked tussock-moth (The), *Orgyia leucostigma* Sm. and Abb., pp. 135–136, fig. 2—Apple-tree tent-caterpillar (The), *Clisiocampa americana* Harr., p. 136, figs. 3–4—Fall webb-worm (The), *Hyphantria textor* Harr. [= *cunea*], p. 136, fig. 5—Oyster-shell bark-louse of the apple (The), *Mytilaspis pomicorticis* Riley [= *pomorum*], pp. 136–137, fig. 6—Round-headed apple-tree borer (The), *Saperda bivittata* Say [= *candida*], p. 137, fig. 7—Flat-headed apple-tree borer (The), *Chrysobothris femorata* Fabr., p. 137—Spring canker-worm (The), *Paleacrita vernata* Peck, p. 137, figs. 8–9—Fall canker-worm (The), *Anisopteryx pometaria* Harris, p. 137, figs. 10–11—Peach-tree borer (The), *Ægeria* [= *Sannina*] *exitiosa* Say, pp. 137–138, fig. 12—Currant-stalk borer (The), *Ægeria tipuliformis* L., p. 138—Imported currant-worm (The), *Nematus ventricosus* Klug. [= *ribesii*], p. 138, figs. 13–14—Native currant-worm (The), *Pristiphora grossulariæ* Walsh, p. 138—Snowy tree-cricket (The), *Œcanthus niveus* Harr., p, 138, figs. 15–16.

2238. R[ILEY], C. V.—Continued.

INSECTS INJURIOUS TO CEREALS AND FORAGE-CROPS:

White-grub (The), *Lachnosterna fusca* Froh., pp. 138–139, fig. 17—Clover-seed midge (The), *Cecidomyia leguminicola* Lintner, p. 139—Joint-worm (The), *Isosoma hordei* Harr., p. 139, fig. 18—Wheat midge (The), *Diplosis tritici* Kirby, p. 139—Cut-worms, family *Noctuidæ*, genera *Agrotis*, *Mamestra*, *Hadena*, and *Prodenia*, p. 139—Wire-worms, family *Elateridæ*, p. 139.

INSECTS INJURIOUS TO GARDEN VEGETABLES:

Imported cabbage-worm (The), *Pieris rapæ* Schrank, p. 139, figs. 19–20—Southern cabbage butterfly (The), *Pieris protodice* Boisd., p. 140—Potherb butterfly (The), *Pieris oleracea* Boisd., p. 140—Cabbage plusia (The), *Plusia brassicæ* Riley, p. 140, fig. 21—Harlequin cabbage-bug (The), *Murgantia histrionica* Hahn, p. 140, fig. 22—Pea-weevil (The), *Bruchus pisi* Linn., p. 140, fig. 23—Bean-weevil (The), *Bruchus fabæ* Riley, p. 140, fig. 24—Blister-beetles, meloid genera *Macrobasis*, *Epicauta*, etc., p. 140, fig. 25—Striped cucumber-beetle (The), *Diabrotica vittata* Fabr., pp. 140–141, figs. 26–27.

INSECTS INJURING MISCELLANEOUS FIELD-CROPS:

Cotton-boll worm (The) or corn-ear worm, *Heliothis armigera*, Hübn., p. 141, fig. 28—Tobacco-worm (The), *Sphinx* [=*Protoparce*] *carolina* L., p. 141.

INSECTS INJURIOUS TO THE VINE.

INSECTS INJURIOUS TO LIVE-STOCK:

Bot-fly of cattle (The), *Hypoderma bovis* Latr., p. 141—Sheep bot-fly (The), *Œstrus ovis* Linn., p. 141, fig. 29—Horse bot-fly (The), *Gastrophilus equi* Fabr., pp. 141–142.

LIST OF PRINCIPAL AMERICAN WRITERS AND WRITINGS UPON INSECTS IN RELATION TO AGRICULTURE 142

2239. R[ILEY], C. V. Army-worm, *Leucania unipuncta*, Haw. <Stoddart's Encylopædia Americana, 1883, v. 1, pp. 317–318, 2 figs.

Distribution, seasons, habits, and food-plants of and means against *Leucania unipuncta*; references to the more important articles on this insect; figures of larva and imago.

2240. RILEY, C. V. An epidemic disease of *Caloptenus differentialis*. <Amer. Nat., December [28 November], 1883, v. 17, p. 1287.

Note to communication of H. Osborn; the *Entomophthora calopteni* a result rather than the cause of disease.

2241. RILEY, C. V. The growth of insect eggs. <Amer. Nat., December [28 November], 1883, v. 17, p. 1289.

Notice of paper of J. A. Osborne; swelling of the eggs of *Phaneroptera* [=*Scudderia*] *curvicauda* probably connected with embryological development.

2242. [RILEY, C. V.] Protective device employed by a glaucopid caterpillar. <Amer. Nat., December [28 November], 1883, v. 17, p. 1289.

Notice of paper of F. Müller; general use of shed hairs by larvæ of *Arctiidæ* in the construction of their cocoons; description of method in which the larva of *Eunomia eagrus* arranges its shed hairs to form a protection for the pupa.

2243. [RILEY, C. V.] Saw-fly larvæ on the quince. <Amer. Nat., December [28 November], 1883, v. 17, p. 1289.

Notice of paper of J. A. Lintner; food-plants of *Selandria* [=*Eriocampa*] *cerasi*.

2244. [Riley, C. V.] Entomology in New York. <Amer. Nat., December [28 November], 1883, v. 17, pp. 1289–1291.

Review of J. A. Lintner's first annual report as State entomologist; list of subjects treated in the report.

2245. [Riley, C. V.] Fruit insects in California. <Amer. Nat., December [28 November], 1883, v. 17, p. 1291.

Review of M. Cooke's "Injurious Insects of the Orchard."

2246. [Riley, C. V.] Death of Dr. J. L. Leconte. <Amer. Nat., December [28 November], 1883, v. 17, p. 1291.

Notes the loss to entomologists occasioned by the death of J. L. Leconte.

2247. [Riley, C. V.] Entomological notes. <Amer. Nat., December [28 November,] 1883, v. 17, pp. 1291–1292.

Brief notices of published articles with items of news.

2248. [Riley, C. V.] Economic notes. <Amer. Nat., December [28 November], 1883, v. 17, p. 1292.

Effect of Phylloxera laws in Europe; use of lime as a means against Macrodactylus; award of the Le Brun prize for the most valuable improvement relating to the silk industry.

2249. Riley, C. V. [Raspberry canes punctured by *Orchelimum glaberrimum*.] <Fruit Recorder, Purdy, 1 December, 1883, v. 15. S.-b. No. 42, p. 92.

Description of and means against *Orchelimum glaberrimum*.

2250. [Riley, C. V.] The Phylloxera in sandy soil. <Rural New-Yorker, 1 December, 1883, v. 42. S.-b. No. 42, p. 97. Reprint: <Amer. Nat., January, 1884 [29 December, 1883], v. 18, p. 78.

Condition of the grape crop in France; favorable account of the use of American grape-stocks; *Phylloxera vastatrix* harmless in sandy soils.

2251. Riley, C. V. Bacterial disease of the imported cabbage-worm. <Sci. Amer., 1 December, 1883, v. 49, p. 337. S.-b. No. 42, pp. 91–92. Reprint: <Amer. Nat., January, 1884 [29 December, 1883], v. 18, p. 80.

Notice of observations of S. A. Forbes on the death of larvæ of *Pieris rapæ* from infection by *Bacterium*; previous mention of this disease.

2252. Riley, C. V. The chinch-bug in New York State. <Sci. Amer., 8 December, 1883, v. 49, p. 359. Reprint: <Amer. Nat., 5 January, 1884, v. 18, pp. 79–80.

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2253. Riley, C. V. Reports of observations and experiments in the practical work of the division, made under the direction of the entomologist. <Bull. No. 3, Div. Ent. U. S. Dept. Agric., [8 December], 1883, 75 pp., 3 pl.

CONTENTS.

Preface 7
Further notes on the army worm (*Leucania unipuncta*) 9
Experiments with pyrethrum 16

2253. RILEY, C. V.—Continued.

CONTENTS—Continued.

Notes on forest-tree insects. By A. S. Packard, jr 24
The cotton-worm in South Texas in 1883. By E. H. Anderson 31
Test of machinery for destroying the cotton-worm. By W. S. Barnard. 39
The tree-borers of the family Cossidæ. By J. S. Bailey 49
Tests of silk fiber from cocoons raised at the Department. By W. McMurtrie 56

2254. RILEY, C. V. Entomology in New York. <Rural New-Yorker, 15 December, 1883. S.-b. No. 42, pp. 85–86.

Review of J. A. Lintner's first report (for the year 1881) as State entomologist of New York.

2255. RILEY, C. V. *Lucilia macellaria.* <Sci. Amer., 15 December, 1883, v. 49, p. 373. S.-b. No. 42, p. 93.

Critical review of paper of F. Humbert.

2256. RILEY, C. V. Dipterous larvæ in the human body. <Sci. Amer., 22 December, 1883, v. 49, p. 385. S.-b. No. 42, p. 90.

References to and notices of several articles on the occurrence of larvæ of Diptera in the human body; synonymy and distribution of *Compsomyia* [=*Lucilia*] *macellaria*; myasis caused solely by larvæ of *Sarcophagidæ* and *Muscidæ*; *Œstridæ* occur rarely and exceptionally in the human body.

2257. RILEY, C. V. Capitalizing specific names. <Papilio, September–December, 1883, v. 3, pp. 164–166. Separate: <[N. Y.], 3 pp.

Comments on reasons given by W. H. Edwards and others for the uniform capitalizing of specific names. See No. 2172.

2258. R[ILEY], C. V. Townend Glover. <Papilio, September–December, 1883, v. 3, pp. 167–168.

Obituary notice.

2259. [RILEY, C. V.] The genus *Colias.* <Amer. Nat., [5] January, 1884, v. 18, pp. 74–76.

Review of paper of H. A. Hagen; discussion of the species of *Colias* in North America; plastic nature and classificatory characters of the genus.

2260. [RILEY, C. V.] Larval habits of the dipterous family *Dexidæ.* <Amer. Nat., [5] January, 1884, v. 18, pp. 76–77.

Notice of paper of F. Brauer; parasitism of *Dexia rustica* and of *Phorostoma latum* on the larva of *Rhizotrogus* and of *Melanophora ? diabroticæ* on *Diabrotica vittata.*

2261. [RILEY, C. V.] Entomological notes. <Amer. Nat., [5] January, 1884, v. 18, pp. 80–81.

Carpocapsa pomonella has been introduced into Australia, New Zealand, and Tasmania; occurrence of *Myrmicocela ochraceella* in ants' nests.

2262. RILEY, C. V. Recent outbreaks of the army-worm. <Rural New-Yorker, 12 January, 1884, v. 43, p. 19. S.-b. No. 56, p. 145.

Rare occurrence of *Leucania unipuncta* in 1882 and 1883, following its last abundance in 1881; occurrence of its larvæ at East Windsor, Vt., in June, 1883.

2263. [RILEY, C. V.] The harlequin cabbage-bug, etc. <Rural New-Yorker, 2 February, 1884, v. 43, p. 70. S.-b., No. 63, p. 41.

Habits of and means against *Murgantia histrionica*; effect of chemicals applied to the soil upon the colors of flowers.

2264. RILEY, C. V. Tribute to the memory of John Lawrence Leconte. <Psyche, November-December, 1883 [11 February, 1884], v. 4, pp. 107-110. Separate: <[Cambridge, Mass., 11 February, 1884], pp. 107-110. Notice: <Psyche, *loc. cit.*, p. 119.

Biographical notice of J. L. Leconte; his work and writings; his personal character; disposition of his entomological collection.

2265. [RILEY, C. V.] Fruit culture in the South. <Washington Post, 26 February, 1884. S.-b. No. 42, pp. 119-120.

Interview with a reporter; means against insects infecting the orange.

2266. RILEY, C. V. Oviposition of the round-headed apple-tree borer. <Rural New-Yorker, 1 March, 1884, v. 43, p. 132, fig. 73. S.-b. No. 42, p. 85; No. 67, p. 3.

Notice of paper of C. G. Atkins; confirmation of the account of the method of oviposition of *Saperda candida*; description of this method; correction of several statements by W. Saunders in regard to the oviposition of different insects; description and figure of the egg of *S. candida*; figures of the burrows and hole of exit of this beetle; figures of the pupa and of the position of the egg when deposited.

2267. [RILEY, C. V., *et al.*] Third report of the United States Entomological Commission, relating to the Rocky Mountain locust, the Western cricket, the army-worm, canker-worms, and the Hessian fly; together with descriptions of larvæ of injurious forest insects, studies on the embryological development of the locust and of other insects, and on the systematic position of the Orthoptera in relation to other orders of insects; with maps and illustrations. <Washington: 1883 [6 March, 1884], pp. 14+347+12+92, 18 figs., 64 pls., 4 maps.

LETTER OF SUBMITTAL XI
PREFACE XIII

PART I.—IN REFERENCE TO THE ROCKY MOUNTAIN LOCUST (*Caloptenus spretus*).

CHAPTER I:

Additions to the chronology of locust ravages in 1880 and 1881 3

The locust in 1880 in Texas, 3; in Colorado, 4; in Utah, 4; in 1881, in Texas, 6; in Utah, 7.

CHAPTER II:

The Rocky Mountain locust in Montana in 1880. By Lawrence Bruner 8

The country from St. Paul to Montana, 8—Between Bismarck and Fort Keogh, 9—Burning often impracticable, 9—Destroying locusts by ditches and kerosene eddies, 13—Ropes dragged to drive them, 15—"Drifts of hoppers," 16—Shooting against locust swarms, 16—Destroying by ditches and burning straw, 17—No more damage for three or four years, 17—Enemies of the locust in the Northwest, 17—Topography of western Dakota and Montana, 19.

CHAPTER III:

The Rocky Mountain locust in Wyoming, Montana, etc., in 1881. By Lawrence Bruner 21

Letter of submittal of report by Lawrence Bruner, 21 — General report, 22—Brief history of depredations, 22—The earlier

2267. [RILEY, C. V., *et al.*]—Continued.

CHAPTER III—Continued.

ones, 23—Characteristics of the permanent region, 24—Settlement and other checks against locusts, 25—Distribution of the permanent regions, 25—Their physical peculiarities, 28—The arid region, 29—Permanent breeding grounds, 29—Their locations and relations, 30—The sources of locusts, 30—Interchange of swarms, 31—Regular migratory routes, 31—Agencies controlling migration, 32—Disadvantages of the temporary regions, 33—Period of hatching, 34—Period of growth, 35—Habits of the young, 36—Habits at maturity, 36—Causes of occasional over-increase, 37—Checks, enemies, 38—The efforts of experts baffled, 42—Tree culture, 42—Climatic checks, 43—Tree planting, 43—Flights affected by storms, 45—Number of annual broods, 46—Sub-permanent region, 46—Its relations, 47—Locust movements therein, 48—How to fight this insect, 49—Locust probabilities, 49—Recent swarms, 50.

CHAPTER IV:

Notes on other locusts and on the Western cricket, *Anabrus*. By Lawrence Bruner 53

Other locusts, 53—List of North American locusts north of Mexico, 55—The Western cricket, 61.

CHAPTER V:

Data obtained from solar physics and earthquake commotions applied to elucidate locust multiplication and migration, by A. H. Swinton 65

Importance of the central luminary, wide effects of variation in its potential energy, 65—On the tides, on chemical and organic activities, on the physical forces, on epidemics, etc., 65, 66—Periods of sun-spots, electrical effects of, 66—Thermometric effects of, 67—Volcanic effects of, 68—Entomological effects of, 68—A new sun-spot table, 69—Statement and tabulation of sun-spot dates, 69—Comparison of sun-spot periods and insect periods, 73—American locusts diminished by the spots, 73—European confirmative examples of locusts and other insects, 74—Tabulation of rare insect captures, 79—Explained, 81—Migration and distribution affected, 81—Locusts again predicted in four or ten years, 83—Conclusions, 84.

PART II.—THE ARMY-WORM, CANKER-WORMS, AND THE HESSIAN FLY.

CHAPTER VI: By C. V. Riley.

The army-worm, *Leucania unipuncta*. By C. V. Riley 89

Nomenclature, 89—Other army-worms, falsely so called, 89—Geographical distribution, 91—Injuries by, 92—Past history of, 92—Descriptive characters of, 101—The egg, 101—The larva, 102—The pupa, 103—Adults and sexual differences, 103—Habits and natural history, 105—Oviposition, 105—Habits when young, 108—Duration of larval life, 109—Traveling habits, etc., 110—Time of appearance, 112—Sudden appearance and disappearance, 114—Food-plants, 116—The pupa state, 117—Habits of the moth, 117—Flight, 118—Position at rest, 118—Number of broods yearly, 118—Hibernation, 122—Natural enemies, 125—Remedies, 128—Burning old grass, etc., 128—Predictions, meteorological influences on the species, 129—Ditching, coal-tar, poisoning, 130—Rolling, fencing, roping, 131—Report of observations by L. O. Howard, 132—Ex-

2267. [RILEY, C. V., *et al.*]—Continued.

CHAPTER VI—Continued.

tent of country injured, 133—Crops injured, 133—Amount of damage, 133—Previous season and crop, 134—Number of broods, 134—An accompanying cut-worm, 135—Natural enemies, 135—Army-worm correspondence in spring of 1882, 136—The invasion of 1880 in New Jersey, by Rev. Samuel Lockwood, 139—Performances of the worms, 139—The direction of travel, 141—Origin, eggs, etc., 143—Breeding spots, 143—Recapitulation, habits, and remedies, 145—Notes from Prof. C. V. Riley, the number of broods, hibernation, seasonal influences, 147—Bibliography, 148.

CHAPTER VII: By C. V. Riley.

Canker-worms, *Paleacrita vernata, Anisopteryx pometaria.* By C. V. Riley 157

Classification, 157—Two distinct insects concerned, 158—Differences between them, 159—Nomenclature, 162—Past history, 165—The spring canker-worm, 170—Range of the species, 170—Characters, 171—Habits and natural history, 172—Appearance of the worms, 173—Food-plants, 174—Modes of distribution, 175—Enemies, 175—Destructiveness of canker-worms, 178—The fall canker-worm, 179—Range of this species, 179—Its characters, 180—Habits and natural history, 181—Oviposition, 182—Season of appearance, 182—Pupation, 183—Food-plants, 183—Remedies and preventive measures applicable to both species, 183—Sticky substances, 183—Hanging tin band, 185—Troughs of oil, 186—Precautions and classification of contrivances, 189—Jarring and burning, 191—Washes and dustings, 191—Paris green, 192—Muriate of lime, 192—Sulphur plugged in trees, 193—Fall plowing, 193—Birds and parasites, 195—Different measures against the species, 196.

CHAPTER VIII:

The Hessian fly—*Cecidomyia destructor*, its ravages, habits, and the means of preventing its increase. By A. S. Packard, jr 198

Introduction, 198—Losses occasioned by the Hessian fly, 199—Description of the fly, 207—Habits, 210—Mode of egg-laying, 211—Effects of the larva, 213—Weather and seasonal influences, 215—Parasites, 216—Remedies, 220—Late sowing, 221—Early sowing, 223—Advantage of high culture, 225—Pasturing with sheep, 225—Sowing hardy varieties, 227—Special remedies, 229—Application of lime, 229—Rolling the ground, 229—Close cutting, 229—Burning stubble, 230—Periodicity of the fly, 230—Chronological table of fly years, 232—Distribution of the fly, 234—Its origin in America, 234—History of its distribution in the Old World, 234—In America, 240—Summary of habits and remedies, 244—List of works and articles on the Hessian fly, 245.

PART III.—SCIENTIFIC RESULTS.

CHAPTER IX:

Descriptions of larvæ of injurious forest insects. By A. S. Packard, jr. 251

Buprestidæ, 251—The flat-headed apple-borer, *Chrysobothris femorata*, 251—*Chalcophora virginica*, 252—*Melanophila* sp., 253—The flat-headed spruce-borer (*Melanophila?*), 254—The flat-headed peach- and cherry-borer, *Dicerca divaricata* Say, 255—Buprestid under hemlock bark, 255—*Cerambycidæ*, 256—Longicorn larva under hemlock bark, 256—*Saperda* on the willow, 256—The lesser pine-borer, *Asemum mœstum* Haldeman, 256—The oak-borer, *Elaphidion parallelum* Newman, 257—The common oak clytus,

2267. [RILEY, C. V., *et al.*]—Continued.

CHAPTER IX—Continued.

Xylotrechus colonus Fabr., 257—*Clytus* (?) larva on black-birch, 259—The ribbed rhagium, *Rh. lineatum* Oliver, 259—The lesser prionus, *Orthosoma brunneum* De Geer, 260—Unknown longicorn borer from an oak log, 261—Unknown longicorn borer in sycamore, 262.

CHAPTER X:

The embryological development of the locust. By A. S. Packard, jr. 263

Formation of the blastoderm, 263—Origin of the primitive amœboid cells, 264—The blastodermic disc or primitive band, 264—The germinal groove, 264—Origin of the cellular or germinal layers, 264—Diagrammatic view of the origin of these layers, from Graber, 265—Embryonal membranes, 265—Serous membrane, 265—Amnion, 265—Tabular view of the eight embryonal layers, 265—Division of the embryo or primitive band into body segments, 266—Development of the appendages, 266; of the nervous system, 266; of the alimentary canal, 266—The stomodæum, 266—The proctodæum, 267—The mesenteron or stomach, 267—The pyloric appendages of the stomach, 267—The Malpighian tubes, 267—The genital glands, 267—The tracheæ and salivary glands, 267—Spinning glands, 267—Development of the wings, 268—Criticism of Gegenbaur's views, 269—Fritz Müller's views, 269—Speculation on the primary origin of wings, 270—Correlation of metamorphosis with the acquisition of wings, and of the latter with the ripening of the sexual organs, 271—Differentiation of mesonotum and metanotum dependent on the presence of wings, 271—Development of a pupal stage, 271—Genealogy of the orders of insects, 271.

The embryological development of orthopterous insects. By A. S. Packard, jr 271

Rapid development of the embryo in autumn, 272—Embryology of *Gryllotalpa vulgaris*, 272—Formation and contraction of the embryonal skins, 272—Formation of the digestive canal, 272—Functions of the mid-gut and hind-gut, 273—Origin of the Malpighian vessels, salivary glands, tracheæ, and ovaries, 273—The sections of eggs studied by the author, prepared by N. N. Mason, 273.

Development of *Caloptenus atlanis*. By A. S. Packard, jr............ 273

Rapidity of development in locust eggs laid in autumn, 273—Requisites for the observation of stages earlier than those studied, 273—Method of preparation of the eggs studied, 274—Structure of the nervous system and eyes, 274; of the heart, 274—Mode of origin of the heart, 274—Contents of the heart, 274—Structure of the tracheæ, 275; of the digestive canal, 275—Relations of the proctodæum to the amnion, 275—Structure of the Malpighian tubes, 276—The yolk cells and yolk granules, 276.

Development of *Caloptenus spretus*. By A. S. Packard, jr............ 277

The primitive segments, 277—The nervous system, 277—The tracheæ, 278—The digestive canal, 278—Details of structure in more advanced embryos, 278—Structure of eyes, 278—Origin of ocelli, 278—Relations of antennæ, eyes, clypeus, and labrum to the procelaphic lobes, 279—Structure of brain and other ganglia, 279—Relations of mandibles and the two pairs of maxillæ, 279—Relative development of legs, 279—Sections of embryo about ready to hatch, 279.

2267. [RILEY, C. V., *et al.*]—Continued.

CHAPTER X—Continued.

The development of the bark-boring beetles *Hylurgops* and *Xyleborus*. By A. S. Packard, jr. 280

Breeding habits of *Xyleborus cælatus*, 280—Oviposition of *Hylurgus pinifex*, 280—Egg of the *Xyleborus*, 24 hours after impregnation, 280—More developed egg, 280—Threads connecting the amnion with the serous membrane, 281—Dorsal view of the embryo, 281—Later stage in *Hylurgops*, 281—Later stage in *Xyleborus*, 281—Number of pairs of spiracles, 281—Structure and habits of freshly hatched *Hylurgops*, 281.

The number of segments in the head of winged insects. By A. S. Packard, jr 282

Views generally entertained on this subject, 282—Head composed of four segments, 283—The procephalic lobes form the antennal segment, 284—The clypeus and labrum are the tergal portion of this segment, 284—The epicranium is the pleural portion, 284—The occiput is the tergal portion of the labial segment, 284—The gular region probably the base of the labium, 285.

CHAPTER XI:

The systematic position of the Orthoptera in relation to other orders of insects. By A. S. Packard, jr 286

Review of the characteristics of the four lowest orders of winged insects, 286—Probable descent of Orthoptera, Pseudoneuroptera, and Dermatoptera from a Thysanuran form, 286—Method of the present study, 286—Characters of the Phyloptera, 287—Mouth-parts, 287—Thorax, 287—Wings, 288—Abdomen, 288—Metamorphosis, 288—Nomenclature of external parts of Arthropoda, 288—Sequence of orders of Phyloptera, 288—Characters of Dermatoptera, 289; of Orthoptera, 289; of Pseudoneuroptera, 290—Want of uniformity in characters of Pseudoneuroptera, 290—The diagnostic characters superficial, 290—Structure of labium, 291—Relative proportions of head-parts, 291—Subdivisions of the order, 292—Characters of Platyptera, 292; of Odonata, 292—Of Ephemerina, 293—Characters of Neuroptera, 293—Ligula, 293—Thorax, 293—Wings, 293—Abdomen, 294—Subdivisions of the order, 294—Tabular view of the grand divisions of winged insects, 294—Diagrammatic view of the genealogy of the insects, 295—Genealogy of the Hexapoda, 295; of Thysanura, 295; of Dermatoptera, 295; of Orthoptera, 296; of Pseudoneuroptera, 296; of Hemiptera, 297; of Neuroptera, 297—Derivation of cruciform larvæ, 297; of Sialidæ, 297; of thysanuriform larvæ, 297—Diversity of Neuropterous larvæ, 297—Larvæ of Sialidæ, 297; of Hemerobiidæ, 297; of Trichoptera, 298; of Panorpidæ, 298—Significance of the abdominal legs of Panorpid larvæ, 299—The hypermetamorphosis of Mantispa a key to the origin of a complete metamorphosis, 299—The aspect of the Neuroptera comparatively specialized and modern, 299—The Neuropterous labium a secondary product, 299—Origin of the Coleoptera, 299—The free, active larvæ of the carnivorous groups most nearly allied to the primitive form, 300—The scavenger and phytophagous larvæ show increasing degradation of development, 300—The relative form of the maxillæ a good index of the general development of the body in Coleoptera, 300—Structure of maxillæ in the several families, 300—Close resemblance of the mouth-parts of Elaterid

2267. [Riley, C. V., *et al.*]—Continued.

Chapter XI—Continued.

larvæ to those of Carabid larvæ, 301—The hypermetamorphosis of Meloidæ furnishes a clew to the probable origin of the different types of Coleopterous larvæ, 301—Brief description of the metamorphoses of Meloe, 301—Of Epicauta, 302—Comparison of the larval stages of Meloidæ with the different types of Coleopterous larvæ, 302—Origin of the Diptera, Lepidoptera, and Hymenoptera, 303—Presence of temporary abdominal appendages on each segment of Lepidopterous, Coleopterous, and Orthopterous embryos, 304—Description of the structure of Dermatoptera (Forficula), 304—Labia, 308—Larva of Forficula, 308—Orthoptera, 309—Blattariæ, 309—Close relation of Blatta and Termes, 310—Structure of Mantidæ, 310—Blatta the stem-form of the Orthoptera, 312—Mantis connects the Acrydii and the Blattariæ, 312—Structure of Phasmida, 312—Diapheromera, 312—Prisopus, 313—This genus connects the Phasmida with the Acrydii, 314—Structure of Acrydii, 314—Caloptenus, 314—Proscopia, 316—Conocephalus, 318—Locustariæ (Anabrus), 318—Gryllidæ, 319—Gryllus, 319—Gryllotalpa, 320—Œcanthus, 322—Sequence of families of Orthoptera, 322—Structure of Pseudoneuroptera, 322—Corrodentia, 322—Perlidæ (Pteronarcys), 322—Psocidæ (Psocus), 325—Termitidæ, 326—Odonata, 329—Ephemerina, 333—Neuroptera, 335—Planipennia, 335—Sialidæ, 335—Hemerobiidæ, 338—Panorpidæ (Panorpa), 342—Trichoptera (Limnophilus), 344.

Chapter XII:

Note on the geographical distribution of the Rocky Mountain locust, illustrated with a colored zoö-geographical map of North America. By A. S. Packard, jr.................................. 346

APPENDICES.

Appendix I:

Early references to the occurrence of the Hessian fly in North America. [3]

Early newspaper references, [3]—In 1784-'85, at Long Island and West Chester, [3]—In 1788, in Long Island, Delaware, New Jersey, and Pennsylvania, [3]—The fly resisted by certain varieties of wheat, [3-5].

Appendix II:

A. Description of the rye gall-gnat. By Dr. Herman Loew.......... [6]

Views as to the original country of the Hessian fly, [6]—The rye gall-gnat and the Hessian fly may not be the same species, [6]—Description of the rye gall-gnat, *C. secalina*, [7].

B. Observations of the new crop gall-gnat. By Dr. Balthasar Wagner, Fulda, 1861. Translated by Carl F. Gissler.................. [8]

Literature, [8]—Preliminary consideration of the subimago and imago stages, [8]—Occurrence at Fulda, [8]—Breeding under nets, [9]—Seasonal and sexual differences, [9]—The fly short lived, [10]—Description of the adult, [10]—Of the male, [12]—Of the female, [13]—The winter generation, [14]—The egg, [15]—The maggot, [16]—The pupa or chrysalis, [19]—The perfect insect, [20]—Seasonal and sexual differences, [21]—Only the maggots hibernate, [22]—Single and double brooded, [23]—Summer generation, [23]—The new cereal gall-gnat as compared with *Cecidomyia secalina* Loew, [24]—Comparison of *C. secalina* Loew with *C. destructor* Say, [24]—Views of Loew, Fitch, and Herrick

2267. [RILEY, C. V., *et al.*]—Continued.

APPENDIX II—Continued.

discussed, [25]—The rye gall-gnat, *C. secalina* and *C. destructor*, all of one species, [28]—The name Hessian fly not justified, [28]—Historical evidence thereon, [28]—Attempt at a new theory of the origin of the insect, [31]—Of Asiatic origin?, [31]—Carried to North America from France or Spain, [32]—Parasites, [33]—Remedies, [34]—The removal of the barley after-growth, [34]—Picking by hand, [35]—Grazing, [35]—Mowing, etc., [36]—Sowing grain as bait, [36]—Plowing, burning, rolling, [37]—Richness of soil, [37]—Resistive varieties of wheat, [38]—Sowing late or early, [38].

APPENDIX III:

The Hessian fly in Silesia in 1869. By Professor Dr. Ferd. Cohn.... [39]

The Hessian fly, *Cecidomyia destructor*, and other Diptera observed destroying grain in Silesia, [39].

APPENDIX IV:

Koeppen's account of the Hessian fly. By F. T. Koeppen, St. Petersburg, 1880 .... [41]

The Hessian fly recently detected extensively distributed in Russia, [41]—Two generations each season, [41]—Number of eggs at each deposition, [41]—Parasites, [41]—Doubtful species of Cecidomyia, [42]—Descriptions of species, [42].

APPENDIX V:

The Hessian fly not imported from Europe. By Dr. H. A. Hagen, Cambridge, Mass.. [43]

Conclusions of the author and others as to the nativity of *Cecidomyia destructor*, [43]—Not imported by the Hessian troops, [43]—Probably here before the war, [45]—Not known in Germany before 1857, [46]—Mistakes corrected, [46]—A critical review of its history, [47]—Marked difference between *C. destructor* and *C. secalina*, [49].

APPENDIX VI:

Report on the Rocky Mountain locust in 1880. By John Marten... [50]

Report to Dr. Cyrus Thomas of observations, [50]—Damages from locusts and wheat flies in Minnesota, [50]—Previous damages from locusts in Dakota, [51]—In Montana, [52].

APPENDIX VII:

Report of notes made in 1880. By A. J. Chipman......................... [55]

No locusts in Kansas, [55]—Suffering from drought, [55]—Favorable climatic changes, [55]—The locusts in Colorado, [56].

APPENDIX VIII:

Miscellaneous locust notes.. [57]

Dates and localities of locust swarms that have attained the coast of Great Britain. Notes by A. H. Swinton, [57]—Occurrence of the migratory locust in Japan, [59]—Early notices of locusts in North America, [59]—Locusts at Fort Frontenac or Cataraqui, Canada, [59]; at Puerto Seguro Harbor, California, [60]—The locust in California in 1880, [60]; in Nevada, [60]—Locusts and coffee-trees in Guatemala, [60]—History of locusts in other countries, [61]—Locusts probably never will do so much damage again in North America, [61]—Utilization of locusts as food, [61]; of crickets as manure, [62]—Ravages of locusts in Russia in 1879 and 1880, [62]; in the Caucasus, [63]; in Elizavetopol, [63]; in the district of Rassachs, [64]—Plowing as a means of killing the

2267. [RILEY, C. V., *et al.*]—Continued.

APPENDIX VIII—Continued.

locusts, [64]—Destruction of locusts in the district of Gori, [64]—Locusts in China in 1878, [65]—Oil as a means of destroying them, [65]—2,000,000 catties of eggs collected, [65]—Article on the extermination of the locust in China, [65–68]—Chinese bibliography of the subject, [65]—Chinese regulations regarding the extermination of locusts, [67]—Locusts in Cape Colony, South Africa, [68]—Ravages of unfledged locusts, [68]—Locusts as food, [69]—Barriers as means of warding off and capturing locusts, [69]—Egg laying and hatching, [72]—Protection against flying locusts, [72]—Locusts in the Philippine Islands in 1878–'79, [72]—The locust plague in Bolivia, [72]—Locusts in India, [73]; in the Ottapidaram Taluq, [73]; in Sattur, [73]—Request of the Madras Government for information as to the movements of the locusts, [74]—Locusts in Kulapurum, Comaralingum, Kolumam, and in the Pulni Taluq, [74]—Difficulties in coping with locusts in southern India, [74]—Means against unfledged locusts, [75]—Locusts driven into the sea at Tuticorin and Trichendur, [76]—Recommendation of rewards for gathering locusts, [76]—Locusts at Peryapatty, [76]; in the Bellary district, [77]—Recommendation of means against locusts, [78]—Locusts at Madura, [78]—Destruction of young locusts by fire at Pothanore, [78]—Locusts at Tiroomoorthypovil, Dhully, and Jellipatty, [79]; in various parts of the Punjab, [79]—Means against the locusts, [79]—Remuneration for destruction of locusts, [80]—Locusts in Cuddapah district, [81].

APPENDIX IX:

Experience with the spring canker-worm. By Martin A. Howell, jr.. [82]

Means employed to save an orchard from the ravages of canker-worms, [82]—Pruning, manuring, and washing of the trees, [82]—Spraying of the leaves with soft soap and arsenite of soda in water, [83]—Belting the trees with sulphur and adhesive mixtures, [83]—Endurance of the moths, [84]—Variation of color in eggs, [85]—Most practical means of relief, [85]—Adulterations of Paris green, [85]—Good force-pumps, [85]—Distribution of canker-worms by the wind, [85].

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CONTENTS.

Introduction 7
Report upon cranberry and hop insects. By John B. Smith 9
Observations on the Rocky Mountain locust and other insects in the Northwest during the summer of 1883. By Lawrence Bruner 51
Preliminary report of observations upon insects injurious to cotton, orange, and sugar-cane in Brazil. By John C. Branner 63
Report on the effects of cold on the scale insects of the orange in Florida. By Joseph Voyle 70
Extracts from correspondence 74
Additional notes on the cultivation of pyrethrum in the United States. 95

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Introduction 285

Scope of the report, 285—Climate and insect phenomena during the year, 285—Silk-culture, 286—Field force of the Bureau, 286—Suggested additions to field force, 287—Office force and its work, 287—Trip to Europe, 287—International Forestry Exhibition at Edinburgh, 287—Phylloxera in France, 288—Exhibit of the Bureau at the New Orleans Exposition, 288—Third report of the United States Entomological Commission, 288—Special reports, 288—Suggestions, 288—Illustrations, 288.

Cabbage insects 289

Cabbage cut-worms 289

General characters, habits, and natural history, 289—Natural enemies, 290—Damage to cabbage, 290.

The dark-sided cut-worm, *Agrotis messoria* 290

Synonymy, 290—Spread, 290—Climbing habits, 290—Natural history, 290—Larva and moth popularly described, 290.

The granulated cut-worm, *Agrotis annexa* 291

Spread, 291—Number of annual generations, 291—Hibernation, 291—Eggs and early states described, 292.

The shagreened cut-worm, *Agrotis malefida* 292

Distribution, 292—Points of difference from *Agrotis annexa*, 293—Early states described, 293.

2291. Riley, C. V.—Continued.

Cabbage insects—Continued.

The W-marked cut-worm, *Agrotis clandestina* 293
Food-plants, 293—Habits, 294—Larva and moth popularly described, 294.

The greasy cut-worm, *Agrotis ypsilon* 294
Synonymy, 294—Distribution, 294—Habits, 294—Food-plants, 294—Hibernation, 295—Larva and moth popularly described, 295—Description of egg, 295.

The speckled cut-worm, *Mamestra subjuncta* 296
Distribution, 296—Habits, 296—Appearance, 296.

The glassy cut-worm, *Hadena devastatrix* 296
Past history, 297—Natural history, 297—Characters, 297.

The variegated cut-worm, *Agrotis saucia* 297
Distribution, 297—Food-plants, 297—Egg and early states described, 298—Rapidity of development, 298.

Remedies for cabbage cut-worms 298
Unsatisfactory remedies, 298—Wrapping the stem, 298—Trapping the worms, 299—Ditching, 299—Fall plowing, 299—The great value of poisoned bait, 299.

Other cabbage insects 300

The imbricated snout-beetle, *Epicærus imbricatus* 300
Distribution, 300—Food-plants, 300—Habits, 301—Remedies, 301—An allied imported insect, said to injure cabbage, 301.

The wavy-striped flea-beetle, *Phyllotreta vittata* 301
Food-plants, 301—Habits, 301—Injury, 302—Early states, 302—Remedies, 302.

Zimmermann's flea-beetle, *Phyllotreta zimmermanni* 304
Food-plants, 304—Habits of larva, 307—Characters as compared with the wavy-striped flea-beetle, 305—Early states described, 306—Other species of the group, 307—Their habits, 307—Natural enemies, 307—*Pleurotropis phyllotretæ* n. sp. described, 308.

The Colorado cabbage flea-beetle, *Phyllotreta albionica* 308
How it differs from the preceding species, 308—Mention of a Pacific coast species, 308.

The Colorado potato-beetle, *Doryphora 10-lineata* 308
Mentioned as sometimes eating cabbage, 308.

The harlequin cabbage-bug, *Murgantia histrionica* 309
Distribution, 309—Its spread to the North and East, 309—Food-plants, 310—Natural history, 310—Amount of damage, 311—Natural enemy, 311—Remedies, 311—Applications, 311—Clean cultivation, 311—Destroying the early broods, 311—Kerosene, 312.

The tarnished plant-bug, *Lygus pratensis* 312
Distribution, 312—Food-plants, 312—Synonymy, 312—Supposed carnivorous habit, 312—Effects of its puncture, 313—Variation in color, 313—Habits, 313—As an enemy to strawberries, 314—Remedies, 314—Preventive measures, 315—Applications, 315.

The false chinch-bug, *Nysius angustatus* 315
Synonymy, 315—Food-plants, 316—Habits, 316—Remedies, 316.

The cabbage plant-louse, *Aphis brassicæ* 317
An imported insect, 317—Damage, 317—Habits, 317—Life-history, 318—Natural enemies, 318—Remedies, 318.

The cabbage Anthomyia, *Anthomyia brassicæ* 319
Introduced from Europe, 319—Life-history, 320—Natural enemies, 320—Remedies, 321.

2291. **Riley, C. V.**—Continued.

Cabbage insects—Continued.

The cabbage Oscinis, *Oscinis brassicæ* 322

First found at St. Louis, 322—Habits, 322—Descriptive, *Oscinis brassicæ* n. sp., 322.

The Rocky Mountain locust, *Caloptenus spretus* 323

Successful introduction of a parasite (*Apanteles glomeratus*) of the imported cabbage-worm 323

General truths in applied entomology 323

Introductory, 323—Benefits derived from insects, 324—Influence of civilization upon insect increase, 324—Losses from insects, 324—Knowledge which the economic entomologist should possess, 325—Habits of the grape phylloxera, 325—Number of species of insects, 326—The different insecticides, 326—Arsenical compounds, 327—Petroleum, 327—Kerosene emulsions, 328—Pyrethrum, 328—Its cultivation in California, 328—Its influence on mammals, 329—Insecticides to be used against root-feeding insects, 329—Mechanical contrivances, 329—The eddy-chamber or cyclone nozzle, 330.

Kerosene emulsions 330

Their importance as insecticides, 330—Use in orange groves, 330—Warning against imperfect emulsions, 331—Formula for kerosene and soap emulsions, 331—Importance of a stable emulsion, 331—Use of a force-pump in making emulsions, 331—Trees injured by unemulsified oil, 332—The use of ley washes in California, 333.

Miscellaneous insects 334

The American Cimbex, *Cimbex americana* 334

Injury to willows, 334—A new habit, 334—Eggs and mode of oviposition, 335—Habits of young larva, 335—Remedies, 336—Other willow enemies, 336.

The streaked cottonwood leaf-beetle, *Lina scripta* 336

Value of the cottonwood in the West, 336—Damage by the beetle in 1884, 336—Other food-plants, and former injuries, 337—Natural history, 338—Remedies, 338—Apparatus for poisoning, 339—Varieties of the beetle, 340.

The Southern buffalo-gnat, *Simulium. pecuarum* 340

Losses in former years, 340—Damage done by European species, 341—Early states of European species, 342—Early states of American species, 342—Recent ravages in the Southwest, 343—Remedies, 344—Smudges, 344—Body applications, 344—Suggestions, 345.

The angoumois grain-moth, *Gelechia cerealella* 345

Abundance, 345—Origin, 345—Past history, 346—Natural history and method of work, 346—Number of annual generations, 347—Results of its work, 347—Parasites, 348—Remedies, 348—Baking and concussions, 348—Quarantine, 348—Bisulphide of carbon, 349—Preventive measures, 349—Description of eggs, 350.

The cottony maple scale, *Pulvinaria innumerabilis* 350

Distribution, 350—History and synonymy, 350—Life history, 351—Food-plants, 352—Mode of spreading, 353—Natural enemies, 354—Remedies, 355.

The cranberry fruit-worm, *Acrobasis vaccinii* 355

Natural history, 355—Remedies, 356—Descriptive, *Acrobasis vaccinii* n. sp., 356—Systematic position, 357.

2291. Riley, C. V.—Continued.

Miscellaneous insects—Continued.

The larger wheat-straw Isosoma, *Isosoma grande* 357

The phytophagic habits of the genus, 357—Mr. Webster's observations, 357—Descriptive, *Isosoma grande* n. sp., 358—Oviposition, 358—Only females known, 358.

Silk culture 359

Sending out eggs, 359—Reports, 359—The manual of instructions, 359—Appointment of Philip Walker as special agent, 359—Diseases, 359—Pasteur's process, 359—A Government reeling establishment, 360—Correspondence, 360—The Serrell reel, 360—Home reeling, 361—Herbelin's filature, 361.

Reports of agents 361

Rust of the orange. By H. G. Hubbard 361

Discoloration of the fruit, 361—Time of appearance, 361—It is not a fungus, 362—The mite on the leaves, 362—First appearance of mites on the fruit, 363—Attacks of mites always followed by rust, 363—Interval between disappearance of mites and appearance of rust, 363—Description of the mite, 363—Life history, 364—Food, 364—Wandering habits, 365—Numerical abundance, 365—Rings of rust on fruit, 366—Influence of weather, 366—Agencies which assist in the distribution of the mites, 366—Food-plants, 367—Effects of attacks on foliage, 367—Rusted fruit, 367—Introduction and spread of the mite, 367—Periods of increase, 368—Geographical distribution, 368—Remedies, 368—Influence of soil and methods of cultivation, 368—Preventive measures, 368—Application of insecticides, 369—Whale-oil soap, 369—Sulphur, 370—Kerosene, 372—Creosote, 372—Potash, 372—Pyrethrum, 373—Lime, 373—Ashes, 373—Caution, 373.

Second report on the causes of the destruction of the evergreen and other forest trees in northern New England and New York. By A. S. Packard, jr 374

Localities visited, 374—Destruction of spruces in northern New York, 374—Probably caused by bark-boring beetles, 375—Destruction of spruces in northern Maine, 376—Discussion of causes, 376—Condition of the hackmatack in 1884, 377—The reddish-yellow spruce-bud worm, 378—Its injuries, 378—Its classification, 378—Its habits, 378—Remedies, 379—The common longicorn pine-borer, 379—Abundance, 379—Mode of oviposition, 380—Description of egg, 380—Habits and damage done, 381—The sugar-maple borer, 382—Its burrows, 382—Its eggs and larvæ, 382—Kerosene as a remedy, 383.

Insects affecting fall wheat. By F. M. Webster 383

The wheat-straw Isosoma, 383—Oviposition, 384—Description of its egg, 385—Number of generations, 385—Effect of its work on wheat-straw, 386—Table of position of larvæ in straw, 386—Natural enemies, 387—Wheat and grass saw-fly, 387—Appearance, 388—Parasites, 388—Wheat midge, 389—Natural enemies, 389—Dates, 389—American Meromyza, 389—Dates, 390—The flea-like negro-bug, 390—Dates, 390—Description of egg, 390—The tarnished plant-bug, 391—The soldier-bug, 391—The field-cricket, 391—Cutting off wheat, 391—Insects affecting rye, 392—Insects affecting oats, 392—The stalk-borer, 392—Dates, 393.

2291. RILEY, C. V.—Continued.

REPORTS OF AGENTS—Continued.

Report upon insects affecting the hop and the cranberry. By J. B. Smith 393

The hop Aphis, 393—Its first appearance, 393—The cranberry fruit-worm, 394—The fire-worm, 395—Cranberry leaf-folder, 395—Its dimorphism, 396—A cecidomyid larva infesting pears at Meriden, Conn., 396—Description of larva and infested fruit, 396—Pupation, 397—Distribution, 397—Varieties of pear infested, 397—Probably an imported pest, 398—Remedy, 398.

Notes from Nebraska. By Lawrence Bruner 398

The Rocky Mountain locust in 1884, 398—Other species of locusts, 399—The snowy tree-cricket, 399—The chinch-bug, 399—Cutworms, 400—The imported cabbage-worm, 400—Its natural enemies, 400—Other cabbage-worms, 401—False caterpillars on grass and sedge, 401—*Cimbex americana* on willow hedges, 401—Injury to cottonwoods by the striped beetle, 402—The Colorado potato-beetle, 403.

NOTES OF THE YEAR 403

Chinch-bug notes 403

The so-called "invasion" of St. Lawrence County, New York, in 1883, 403—Mr. Lintner's prediction and his reasons therefor, 403—Reasons for dissenting from this view, 404—The result in 1884, 405.

Notes on the grape Phylloxera 405

Regarding the grape Phylloxera in Russia, 405—In reference to the treaty ot Berne and the prohibition of the introduction of bulbs and cuttings from the United States into Germany, 407—The grape Phylloxera in graperies; legal questions arising, 408.

Miscellaneous notes 410

The box Psylla found in the United States, 410—The dwarfing of oaks by *Mallodon melanopus*, 410—The clover-seed midge, 411—The potato-stalk weevil, 411—The red-humped prominent, 411—The varying anomala, 412—White-lined morning-sphinx, 412—The apple-tree tent caterpillar, 412—Corn bill-bugs, 413—A swarming mite, 413—A new enemy to white roses, 413—A beetle eating peach-leaves, 413—Effect of cold on the eggs of bark-lice, 413—Ravages of grain-weevils in Florida, 414—Fuller's rose-beetle, 414—The blood-sucking Conorhinus, 414—The catalpa sphinx, 415—Notes on cotton worms, 415—Pyrethrum, 416.

Notes from Missouri. By M. E. Murtfeldt 416

The striped flea-beetle, 416—The Colorado potato-beetle, 416—The imported cabbage-butterfly, 416—The cottony maple scale, 417—The stalk-borer, 417—*Grapholitha prunivora*, 418—The grape saw-fly, 418—A saw-fly on plum, 418—A saw-fly on ash, 418.

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2304. **Riley, C. V.** The imported elm-leaf beetle. Its habits and natural history and means of counteracting its injuries. <Bull. No. 6, Div. Ent. U. S. Dept. Agric. [14 May], 1885, 20 pp., 1 pl., 1 fig.

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2306. **Riley, C. V.** [Poisonous spider.] <Rural New-Yorker, 23 May, 1885, v. 44, p. 354. S.-b. No. 61, p. 23.

Reply to statements of Dr. W. H. G.; no spider known whose foot-tracks kill leaves or trees.

2307. [**Riley, C. V.**] Expected advent of the locust. <Sci. Amer., 23 May, 1885, v. 52, p. 320. S.-b. No. 61, p. 9. <Farmer's Home Journ., 13 June, 1885. S.-b. No. 63, p. 18. <Orange Co. [N. Y.] Farmer, 28 May, 1885. S.-b. No. 63, p. 23. <See: <Sci. Amer., 20 June, 1885, v. 52, p. 389. S.-b. No. 63, p. 28.

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2308. **Riley, C. V.** Rust of orange. <Rural New-Yorker, 16 May, 1885, v. 44, p. 355, figs. 196, 197. S.-b. No. 61, pp. 18–19, figs. 196–197. Reprint: <Colman's Rural World, 18 June, 1885, v. 38, p. 195, 2 figs. S.-b. No. 61, pp. 31–32, 2 figs.

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2310. [RILEY, C. V.] Ridding the ground of cut-worms. <Rural New-Yorker, 30 May, 1885, v. 44, p. 368. S.-b. No. 63, p. 22.

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Records and map showing distribution of brood XXII (*septendecim*) and of brood VII (*tredecim*); habits, enemies, and figures, with details of structure of *Cicada* [= *Tibicen*] *septendecim*; figure of twig punctured by the same and of twig healed after the puncture.

2313. [RILEY, C. V.] The winged pests of the West. <St. Louis Globe-Democrat, 9 June, 1885. S.-b. No. 61, p. 11.

Prediction that the northern States of the Mississippi Valley will escape serious damage from locusts this year; reasons for this opinion; ravages of *Camnula pellucida* in California.

2314. RILEY, C. V. The periodical or seventeen-year Cicada. <Amer. Grange Bulletin, 11 June, 1885. S.-b. No. 63, pp. 16–17.

Chronological record, natural history, and popular names of *Cicada* [= *Tibicen*] *septendecim.*

2315. RILEY, C. V. The periodical Cicada. An account of *Cicada septendecim* and its *tredecim* race, with a chronology of all broods known. <Bull. No. 8, Div. Ent. U. S. Dept. Agric., [17 June], 1885, 46 pp., 8 figs. Second edition, 13 July, 1885.

2316. RILEY, C. V. Notes on joint worms. <Rural New-Yorker, 20 June, 1885, v. 44, p. 418, figs. 215–218.

Habits, means against, and figure of *Isosoma hordei*; criticism of A. J. Cook's views on *Isosoma*; figures *I. tritici* and *I. grande.*

2317. RILEY, C. V. Beetles in the corn-fields. <Daily Gate City [Keokuk, Iowa], 23 June, 1885. S.-b. No. 61, p. 17.

Answer to letters of J. M. Evans and J. M. Schaffer; *Agonoderus pallipes* injurious to seed corn; recommends soaking the seed corn in Paris green or London purple.

2318. RILEY, C. V. Notes on the periodical Cicada. <Science, 26 June, 1885, v. 5, pp. 518–521. Reprint: <Sci. Amer. Suppl., 27 June, 1885, v. 19, pp. 7905–7906. S.-b. No. 61, pp. 47, 48; No. 63, p. 74.

Record showing distribution of brood XXII (*septendecim*) and of brood VII (*tredecim*) in 1885; the specific value of the different forms; long period of underground development; its life-history; food of the larva, methods of burrowing, and transformations; the Cicada versus civilization.

2319. RILEY, C. V. The Chester onion pest. <Orange County [N. Y.] Farmer, 2 July, 1885. S.-b. No. 61, pp. 1–2. See: <Rural New Yorker, 5 December, 1885, v. 44, p. 829. S.-b. No. 61, p. 151.

Extract from Rept. U. S. Ent. for 1884; remedies against cabbage cut-worms; the poisoned ball system and kerosene emulsion effective against the onion cut-worm; formula for a soap-kerosene emulsion.

2320. Riley, C. V. Premature appearance of the periodical Cicada. <Science, 3 July, 1885, v. 6, pp. 3–4.

Criticism of L. F. Ward's record of the occurrence and song of *Cicada* [=*Tibicen*] *septendecim*. See No. 2326.

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The occurrence of *Cicada* [=*Tibicen*] *septendecim* in southeastern Massachusetts needs confirmation.

2322. Riley, C. V. Destructive insects of the year. <Rural New Yorker, 11 July, 1885, v. 44, p. 464. S.-b. No. 61, p. 8.

Injuries and means against *Agrotis malefida, Anthonomus musculus* and *Eurycreon rantalis*; localities and food-plants of the last.

2323. [Riley, C. V.] [Grasshopper ravages in California.] <Rural New-Yorker, 11 July, 1885, v. 44, p. 470. S.-b. No. 61, p. 2.

Ravages committed by *Melanoplus* [=*Caloptenus*] *devastator* and *Caloptenus differentialis*; recommends the use of coal-oil pans against them.

2324. Riley, C. V. Pests of the strawberry. <Rural New-Yorker, 18 July, 1885, v. 44, p. 484. S.-b. No. 61, p. 17.

Answer to inquiry of J. H. J.; means against *Agrotis tricosa, Phoxopteris fragariæ, Eccopsis permundana* and *Emphytus* [=*Harphiphorus*] *maculatus*.

2325. Riley, C. V. The imported elm-leaf beetle. <Harper's Weekly, 18 July, 1885, v. 29, p. 463, 1 fig. S.-b. No. 61, pp. 21–22, fig.

Natural-history descriptions and figures of all stages of *Galeruca xanthomelæna*; means against the same.

2326. Riley, C. V. Premature appearance of the periodical Cicada. <Sci. Amer. Suppl., 15 August, 1885, v. 20, p. 8021.

Criticism of L. F. Ward's record of the occurrence and song of *Cicada* [=*Tibicen*] *septendecim*; an introductory note states that this article was prepared for Science, but that it appeared in that journal in a mutilated and weakened form. See No. 2320.

2327. Riley, C. V. The cyclone nozzle. <Rural New-Yorker, 22 August, 1885, v. 44, p. 567. S.-b. No. 61, p. 34.

Facts relative to the invention of the cyclone nozzle.

2328. Riley, C. V. A new remedy against destructive locusts. <Rural New-Yorker, 29 August, 1885, v. 44, p. 577. S.-b. No. 61, p. 33.

Recommends the use of poisoned bait; formula of the same.

2329. Riley, C. V. The influence of climate on *Cicada septendecim*. <Entom. Amer., August, 1885, v. 1, p. 91.

Records the transfers of eggs of brood XXII (*septendecim*) of *Tibicen septendecim* to the extreme southern States where no *septendecim* brood is known to occur, and of brood VII (*tredecim*) to northern States where no *tredecim* brood is known to occur.

2330. Riley, C. V. Department of insects. <Ann. Rept. of Regents Smith. Inst. for 1883, 1885, pp. 239–244.

Brief mention of work accomplished in the U. S. National Museum; list of accessions to the collection.

2331. RILEY, C. V. Insects of the year. <Prairie Farmer, 3 September, 1885, v. 57, p. 567. S.-b. No. 63, p. 37; 134. See: <Entom. Amer., December, 1885, v. 1, pp. 176–177.

Ravages of *Agrotis messoria*, *Anthonomus musculus*, *Eurycreon rantalis*, *Cecidomyia destructor*, and *Acrididæ* on the Pacific coast.

2332. RILEY, C. V. On the parasites of the Hessian fly. <Proc. U. S. Nat. Mus., 14–17 September, 1885, v. 8, pp. 413–422, pl. 23. Abstract: <Proc. Amer. Assoc. Adv. Sci. for 1885, [August], 1886, v. 34, pp. 332–334. <Amer. Nat., November, 1885, v. 19, pp. 1104–1105.

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LETTER OF SUBMITTAL xvii
PREFACE xix
INTRODUCTION xxiii
CHAPTER I:
Classification and nomenclature. Destructiveness 1
Popular and scientific names, 1—Most desirable popular name, 1—Different technical names, 1—History of these names, 1—The name *Aletia xylina* the correct one, 1—Synonomy of the insect, 2—Classificatory position, 2—Importance of the family Noctuidæ, 2—Destructiveness of the worm, 2—Causes which increase this destructiveness, 2—Regions where losses are greatest, 2; and least, 3—Tabular statement of losses, 3—Previous statements, 3—Statement of loss in 1881, 4.
CHAPTER II:
Characters, habits, and natural history 5
Distinct states of growth, 5—The worm must hatch from an egg, 5—Description of egg, 5—Where the egg is laid, 5—Number of eggs to a leaf, 6—Time elapsing before hatching, 6—Unhatched eggs perish when frozen, 6—Insects' and other eggs mistaken for eggs of Aletia, 6—Characters of worm, 6—Description of newly-hatched worm, 6—Number of molts, 7—Different colors of worm,

2343. RILEY, C. V.—Continued.

CHAPTER II—Continued.

7—Habits of worm at different stages, 7—Jumping habit, 7—Only known to feed on cotton and one another, 8—Odor of the worm, 8—Migrations of worm, 8—Method of pupation, 8—Formation of cocoon, 8—The worm never burrows in the ground, 8—Distinctive characters of the chrysalis, 9—Duration of chrysalis state, 9—Distinctive characters of the moth, 9—Sexual differences in the moths, 9—Different habits of the moths at night and by day, 10—Their strong flight, 10—Their position at rest, 10—How soon the female begins to lay, 10—Her prolificacy, 10—Food of the moth, 10—It injures fruits, 11—Structure of the tongue, 11—Mention of other *Noctuidæ* which injure fruits, 11—Time elapsing from one generation to another, 11—This will average about one month, 12—Time of year when the first worms appear, 12—Former opinions erroneous, 12—Dates of earliest appearance variable, 12—Worms of all sizes found in Florida and southern Georgia in the latter part of March, 12—First worms always few and scattered, 12—They multiply and spread irregularly, 12—Their progress governed by the season and latitude, 13—The third generation often called the first, 13—Number of annual generations, 13—There are at least seven in southern Texas, 13—Gradual progress and succession of broods, 14—The second generation exceptionally very injurious, 14—Why not usually so, 14—Extent of migratory flights of the moths, 15—Probable existence of northern food-plants, 15—Causes and seasons of migration, 15—Behavior of migrating moths, 15—The question of hibernation, 15—Different former opinions and beliefs concerning hibernation, 16—Discussion of these opinions, 16—The chrysalides are killed by a temperature below 22° F., 16—Parasited chrysalides can bear greater cold, 16—Fallacy of the belief that the chrysalis winters underground, 16—Ease with which erroneous conclusions can be drawn from mistaken identity, 17—The chrysalis of *Aspila virescens* mistaken for that of the *Aletia*, 17—Chrysalides of other cotton larvæ found underground in abundance, 17—The chrysalis of *Aletia* killed by burial, 17—Ability of the moth to survive the winter, 18—Unreliability of most testimony as to the hibernation of the moth, 18—Other moths easily mistaken for it, 18—*Hypena scabralis*, 18—*Phoberia atomaris*, 19—*Leucania unipuncta*, 19—Absence of testimony to the survival of the moths beyond March, 19—Theory of annual introduction of the species from some southern foreign country, 19—Statement and discussion of Grote's arguments and of others in support of this theory, 20—Arguments in favor of the hibernation of the moth, 21—Both immigration and hibernation may occur, 21—Summary of the evidence, 22—*Aletia* hibernates only as a moth and only in the extreme south, especially in Texas, 22.

CHAPTER III:

Past history of the cotton-worm in the United States................ 23

From 1793 to 1825, 23—From 1826 to 1846, 24—From 1847 to 1866, 25—From 1867 to 1869, 26—From 1869 to 1872, 27—In 1872 and 1873, 28—In 1873 and 1874, 29—In 1875 and 1876, 30—In 1877 and 1878, 31—In 1879 and 1880, 32—In 1880 and 1881, 33—History of remedies, 34—Hand-picking and poultry, 34—Fires, 35—Other

2343. Riley, C. V.—Continued.

Chapter III—Continued.

remedies, 35, 36—Arsenic, 36—Paris green, 36–38—Planting jute, 38—Machinery, 38—London purple, 38—Pyrethrum, 38.

Chapter IV:

The cotton-worm in other countries.................................... 39

Geographical distribution of *Aletia xylina*, 39—Other insects injurious to cotton in the Eastern Hemisphere, 39—Occurrence of *Aletia xylina* on the Pacific coast of Mexico, 39–40—On the Gulf coast of Mexico, 40–41—In Yucatan, 41—In the West Indies, 42—In the northern countries of South America, 42–43—In Brazil, 43–44.

Chapter V:

On the anatomy of *Aletia*. By Edward Burgess and C. S. Minot.... 45

Circumstances under which this chapter was prepared, 45—External anatomy of larva, 45—True legs, 45—Prolegs, 46—Colored markings, 46—Stigmata, 46—Internal anatomy of larva, 47—Head, 47—Ganglia, 47—Digestive canal, 47—Malpighian vessels, 47—Salivary glands, 47—Dorsal vessel, 47—Stomach, 48—External anatomy of imago, 48—Method of preparing the exoskeleton for examination, 48—Head and appendages, 48—Prothorax, 48, 49—Mesothorax, 49—Metathorax, 49, 50—Supposed organ of hearing, 50—Abdomen, 50–51—Spiracles, 51—Legs, 51—Scales, 51–52—Scale-pores, 52—Proboscis, 52—Spines, 53—Internal anatomy of imago, 53—Digestive canal, 53—Pharynx, 53–54—Salivary glands, 54—Œsophagus, 54—Food reservoir, 54–55—Stomach, 55—Malpighian vessels, 55—Intestines, 55—Aorta, 55—Nervous system, 55—Ganglia, 55—Terminal body segments and organs of reproduction, 56—Brush-sac, 56—Male organs of reproduction, 56—Testes, 57—Vasa deferentia, 57—Penis, 57—Female organs of reproduction, 57—Ovaries, 57—Sebaceous glands, 57—Vagina, 58—Copulatory pouch, 58—Terminal abdominal segments of the female, 58.

Chapter VI:

The cotton belt. By Prof. E. A. Smith 59

A. General features of the cotton States............................ 59

Region included in the cotton belt, 59—Climate, 59—Winds, 59—Rainfall, 59–61—Temperature, 61–62—Geological sketch, 62–63—Topography, 63–64—Soils, 64–65—Agricultural subdivisions, 65—Regions of forest growth, 66–67.

B. Description of the agricultural subdivisions.................... 67

The alluvial region, 67–68—The lower prairie region, 68–69—The long-leaf pine region, 69–71—The oak uplands region, 72–73—The upper prairie region, 73–75—The red and brown loam region, 75–77—The sandy and siliceous lands of the older formations, 77–79—The gneissic region, 79–80.

Chapter VII:

Terrestrial and meteorological influences affecting the worm......... 81

Condition of soil and plant connected with the appearance of the first worms, 81—The earliest worms are confined to the "low lands," 81; and to luxuriant plants, 82; and to the vicinity of winter shelters, 82; and to the same localities, 82—Influence of wet weather on the development of the worms, 83—Severe rains with gales destroy both worms and crop, 83—Late cold rains do the same, 84—Frequent summer rains favor the development of the worms, 84—Hot, dry weather destructive to them, 84—Artifi-

2343. **Riley, C. V.**—Continued.

Chapter VII—Continued.

cial drought produces the same effect, 84—Indirect influences of wet weather in favoring the development of the worms, 85—Immunity of the worms from their enemies in wet weather, 85—Drowning of ants by heavy showers, 85—Wet weather prevents poisoning and working the cotton, 85—Letter from J. W. Du Bose on the influence of winds on *Aletia*, 85–86.

Chapter VIII:

Natural enemies 87

General remarks, 87—Importance lessened by the use of arsenical poisons, 87—Vertebrate enemies. 87—Quadrupeds, 87—Birds, 87—English sparrow, 88—Toads and lizards, 89—Invertebrates, 89—Spiders, 89—Ants, 90—Species of ants destroying *Aletia*, 90—Hubbard's observations on ants, 92—The leaf-cutting ant, 94—Wasps, 94—Coleoptera, 95—Tiger-beetles, 95—Ground-beetles, 95—Lady-birds, 96—Soldier-beetles, 96—Heteroptera, 97—List of species, 97—Diptera, 99—Orthoptera, 99—Neuroptera, 100—Lepidoptera, 100—Parasites, 101—List of species, 101—The Trichogramma egg-parasite, 102—The cotton-worm Microgaster, 104—Comstock's Euplectrus, 105—*Elachistus euplectri*, a secondary parasite, 106—The common flesh-fly, 107—*Cyrtoneura stabulans*, 108—Is it parasitic ?, 108—Tachina-flies, 109—Their habits, 109—The watchful Pimpla, 111—The ring-legged Pimpla, 113—*Cryptus nuncius*, 113—The ovate Chalcis, 114—The devouring Tetrastichus, 115—Species that are easily mistaken for parasites of *Aletia*, 115—*Hexaplasta zigzag*, 115—*Phora aletiæ*, 116.

Chapter IX:

Preventive measures 120

Mode of cultivation, 120—Improving cotton seed, 120—Forcing the young plants, 120—Transplanting from hot-beds, 120—Objections, 121—Frequent cultivation, 121—Topping the cotton, 121—Fertilizers, 121—Sulphuric acid on seeds, 121—Late planting, 121—"Worm-proof cotton," 121—Diversified agriculture, 122—Rotation of crops, 122—Jute as a protection, 122—Other supposed protective plants, 123—Protection of natural enemies, 123—Immunity of cotton under trees, 124—Preventing oviposition of the moth, 124—Futility of decoctions for this purpose, 125—Road dust, 125—Early application of direct remedies, 126—Concerted action, 126—Early poisoning and hand-picking, 126—Cotton-worm warnings, 127—Destroying chrysalides accidentally carried into gin-houses, 127—False theories, 127—Burning the stalks, 127—Winter plowing, 127—Salt, 127.

Chapter X:

Remedies; means of coping with the insect; substances used for its destruction 128

Destruction of the eggs, chrysalides, and moths, 128—Destruction of the eggs impracticable, 128—Little chance for successful destruction of the chrysalides, 128—Destruction of the moth, 129—Lights and fires for attracting the moths, 129—Indifferent success with lamps used at Columbus, Tex., 130—Importance of using lamps early in the season, 130—Apparent success with lamps near Hearne, Tex., 131—Great attractiveness of the electric light, 131—Movable lights, 131—Poisoned sweets and fluids, 131—Fondness of the moths for ripe fruit, 132—Killing moths by poisoned fruit,

2343. **Riley, C. V.—Continued.**

Chapter X—Continued.

132—Method of using poisoned liquids, 132—No results from using poisoned baits late in summer, 133—Poisoning the glands of the plant, 133—Cotton-leaf essence and its attraction to the moth, 134—Hand-picking, 135—Mechanical means of killing the worms, 136—Shaking off the worms, 136—Poisoning the worms, 136—Progress in the use of insecticides, 137—Classification of insecticides, 137—Importance of preparing materials in advance, 138—Arsenical compounds, 138—Safety in their use, 138—Difficulty in determining minimum quantities, 139—Overdoses of poisons, 139—General rules in dry applications, 140—Mixing devices, 141—Ingredients, 141—Wet application, 142—Principles to be followed and ingredients to be used, 142—Comparison of dry and wet applications, 142—Paris green, 143—Historical data, 143—Liquid application, 143—Dry application, 144—Minimum quantities, 144—Patents on Paris-green combinations, 146—Arsenic, 147—Commercial arsenic, 147—Arseniate of soda, 147—Fowler's solution, 148—Johnson's dead-shot, 148—Texas cotton-worm destroyer, 149—London purple, 149—Manufacture and analysis, 149—History of its use, 150—Experience in Alabama in 1880, 150—Advantages and disadvantages, 151—Dry application, 151—Wet application, 152—Other mineral substances, 153—Salt and saltpeter, 153—Sulphur, 154—Red lead, 154—Road dust, 154—Oils and allied substances, 155—Kerosene, 155—Former methods of application, 155—Invention and perfection of emulsions, 156—Method of preparing emulsions, 157—Formula for perfected emulsion, 158—Experiments with imperfect emulsion in 1880, 158—Experiments with perfected emulsions, 160—Oil of creosote, 162—Oil of tar, 162—Gas-tar water, 162—Carbolic acid, 163—Cotton-seed oil, 163—Vegetable insecticides, 164—Pyrethrum, 164—History, 164—Mode of cultivation, 165—Success in cultivating the plant in America, 166—Preparation of the powder, 167—Its use as an insecticide, 168—Advantages and disadvantages, 168—Active principle in Pyrethrum, 169—Its effects on cotton-worms, 169—Imported *vs.* Californian powder, 170—Dry application, 170—Minimum quantities of dry powder, 171—Dry powder mixed with flour and other ingredients, 172—Application in fumes, 174—Alcoholic extract, 174—Experiments with extract obtained by distillation, 174—Experience with extract obtained by repercolation, 176—Use of the powder in simple water solution, 177—Tea or decoction of Pyrethrum, 178—Effect of Pyrethrum upon other insects, 179—Prospects for the use of Pyrethrum for the cotton-worm, 180—Ox-eye daisy powder and its uselessness as an insecticide, 180—Extracts and decoctions from various plants, 181—Difficulties in the way of discovering new vegetable insecticides, 182—Mode of preparing the extracts and diffusions, 183—List of the plants experimented with, 184—Effect of alcohol upon the worms, 187—Yeast ferment and fungus infection, 188—Dr. Hagen's recommendations of the use of yeast as an insecticide, 188—Objections to Dr. Hagen's plan, 189—Negative results obtained by the Commission, 190.

Chapter XI:

Machinery and devices for the destruction of the worm. By W. S. Barnard, Ph, D 191

2343. Riley, C. V.—Continued.

Chapter XI—Continued.

I. Spray nozzles, classification, preferred kinds, 191—*Many-punctured nozzles*, 191–196—Preferred construction, 191–193—Straining and cleaning *vs.* clogging, 192—Eddy-roses, their operation, construction, and leading importance, 192–193—Plug-roses, action and construction unsatisfactory, 193–194—Johnson's, Melcher's, Dawson's, Foster's, 193—Lynch's, 194—Colliding jets, gas-jets, superiority, Daughtrey's, Weber's, Prouty's, 194—T-roses, 194—Yeager's, Warner's, improvements, 195—Divided rose-heads, clutch-head of Mast, Foos & Co., Foss', Fox's, Barrows', Vose's, 195—Peripheral roses [divided], Melcher's, Yeager's, Ruhmann's, 196—Rose-combinations of Barry, Prentice, etc., 196—*Slot nozzles*, 196–205—Operation, 196—Preferred construction, 196–201—Disadvantages, improvements made, 197–201—Eddy-chambered, 197–199—Lip construction, 198–199—Inside cleaner, 199—Simple slot-nozzles, Fowler's, Mallory's, Iske's, 201–202—Plug slot-nozzles, Allen's, Ruhmann's, Johnson's, "The Niagara," Pinter's, 202—Removable slots of Long, Vestal, and Merigot, 203—Jawed slots, "The Boss Nozzle," Raymond's and Perkin's, Smith's, Moffet's, 203—Williams', Ruhmann's, Pinter's, 204—Stanton's, 205—Side slots, Schier's, Melcher's, 205—*Deflector nozzles*, 206–211—Definition, use, applicability, relative merits, 206—Drip-waste, clogging, 206—Simple constructions made, 206–208—Conformations for narrow, wide, and even sprays, 206–207—Removable deflectors, 207—Hollings', Douglas's, Nickerson's, 208—Hayden's, Killam's, Lewis', Schier's, Barrett's, 209—Ruhmann's, Binkley's, Schier's compound, 210—Schier's and Polansky's, 211—*Centrifugal nozzles*, 211–221—Operation, kinds, choice, 211—The new and most perfect sprayers, 212—Eddy-chambered, 212–219—Conformation and operation, 212—Clogging, cleaning, construction principles, 213—Forms described, 214—Whistle-jets, 215–216—For blast-atomizers, 216—*Eddy-jets proper*, 216–219—Involute form, cone form, 216—Convex and concave forms, 217—Direct discharge, proximal diagonal discharge, 217—Distal diagonal discharge, 218—Centrifugal nose-pieces, double-cone or double-chambered form, and chambered plug form, 218—Direct spray and solid jet, 219—*Fistular spray nozzles, hose-pipes*, 219—With rotary segment, Hotz's, Clifford's, Gielow's, Johnson's, Hoyer's, Clarke's, 220—With cross-plug, McGaffey's, Johnson's, Gray's, Gielow's, Hosford's, 221—Spray-wheels, 221.

II. Centrifugal throwers, 221–226—Their character and operation, 221—Rotated orifices, pronged reels, brush poison-throwers, 222—Brush fibers, 222–223—Rotary polishing brushes, improved construction, fiber strength, spring and density, 223—Feeding the brushes with liquid, 223–225—With powder, 224—A simple brush thrower of powder, 224–225—Advantages over-sifters, velocity of rotation, 225—Wisewell's, 225–226—Whisps and brooms, rotated recesses, 226.

III. Blowers of poison, 226–252—*Rotary blowers*, 226–235—Kinds and success of, 226–227—*For blowing powder*, 227–232—Hoppers and adjustable feeders, 227–228—Blower encasements and blast-pipes, 228–229—Blast forks and deflectors, 229—Improved light rotary blowers, 229–230—Hauled blowers, compound rotary blower, A-frame and legged swivel wheels, 230—Rotary velocity, 231—

2343. **Riley, C. V.**—Continued.

Chapter XI—Continued.

Hurd's rotary powder blower, 231–232—*For blowing liquids*, 232–235—Improved feeders of liquid to rotary blower, 232–233—Drip-catcher, forked blast spray, 233—Darnell's rotary liquid-blower, 233–234—Hurd's ditto, and Perl's rotary fume-blower, 234—Force-blast rotary blowers—*Oscillating blowers*, 235–251—Bellows power, construction, durability, improvements, 235–236—*For blowing powders*, 236–243—Hermetic powder-box, 236—Feeders of powder to blasts, 236–237—Pipes, forks, and nozzles for these powder blasts, 237–238—Hauled compound bellows powderer, to wagon, with motor, etc., 238—Cultivator bellows-blower, 238–239—Knapsack and horse-back bellows powderers, 239—Improved small hand-bellows powderers, 239–241—With forks, 241—Allen's powderer, 241—Common powder bellows, Woodason's, Hendley's improved, 242—Stelle's, etc., 243—*For blowing fluids*, 243–249—Importance, resuction, feeding by blast-suction, blast-pressure, gravitation, gauges, 243–244—Blast spray conductors and nozzles, reverberatory, 244—Whistle-jets and agitation chambers, 245—Common blast atomizers, 245—Improved automatic-feeding blast sprayers, 246–249—Reatomizing, reverberatory nozzles, 247—Nether blast sprays, directing pipes and nozzles, 248—Compound combinations, 249—Peck's blast sprayer, and Wallace's, 249—*Reciprocating or pistoned blowers*, 249–251—Improved air-pump apparatus, 249–250—Air-pumps of Humphryville, Rumsey, etc., 251—*Generator blowers*, 251–252—Steinmann's vaporizer, 251.

Chapter XII:

Machinery and devices for the destruction of the worm—continued. 253

IV. Pneumatic compression squirters, 253–261—Kinds, advantages, available fire-extinguishers, 253–254—Carbonic anhydride, apparatus, practicability, 255—Danger, antidotes, safety constructions, 255–256—Simple generators, 257—*Rotary force-blast, compression ejectors*, 257—*Oscillating bellows, pneumatic compression ejectors*, 257—*Reciprocating or pistoned ditto*, 258–261—Simple kind to construct, beer forcers applicable, Worswick Co.'s, Weindel's, Rumsey's, Douglas's, 258—Daughtrey's underspray theory and machine, 258–261—The author's devices, 259—Weber's nozzles, 260.

V. Solid compression squirters of poison, 261–283—Kinds, 261—*Rotary force-pumps*, 261–262—*Hydraulic bellows*, 262—*Oscillating force-pumps*, 262—*Reciprocating force-pumps*, 262–283—Kinds, 262—*Hydronettes* and *fountain pumps*, 262–269—May's patent, Tyler's, Servants', Staples', Whitman's fountain pump, 263—Hydronettes, double-acting, Deakin's, Rumsey's, cost, 264—Author's improvements in knapsack apparatus, 264–265—In knapsack fire-extinguishers, Condict's and Doty's, 265—In horseback apparatus, Warner's, author's, 265—In cart or wagon, 265–268—Calahan's carts, legged wheels, tongue or shafts, 266—Wagon use, Trelease's report, 266–268—More economic devices, 268—Other pumps not in trade, 268–269—*Aquapults, aquajects, aquarius, excelsior, hydropult*, 269–271—Operation, cost, 269—Aquapult, Johnson's patents, Douglas', Prouty's, 269-270—Johnson's syringe, Douglas' aquarius, Rumsey's aquaject, 270—Deakin's excelsior, Vose's hydropult, 271—*Bucket pumps* and *knapsack*

2343. Riley, C. V.—Continued.

Chapter XII—Continued.

pumps, 271–274—Lewis's, 271—Korth's and less desirable kinds, Stoner's, Mallory's Kaiser's, Dix's, 272—Crandal's, Holland's knapsack extinguishers, Douglas's, Stanton's, 273—Bucket poisoners, McDonald's, Allen's watering-pot improvements, 273—Amor's and Lane's can-syringe, Hull's, Wisner's, 274—*Barrel and tank pumps and appurtenances*, 274–283—*Single acting*, discharging below the piston, Melcher's, 274—Voglesang's, Ruhmann's, 275—Polansky's, Schier's, Butman's, Ball's agitator, 276—Evenden's, Helmecke's, 277—Yeager's pump and nozzle, 277–278—Pinter's, 278—Single-acting, discharging from above the piston, Chipley's, Weith's, 278—Available cistern or well pumps, 278–279—Barrow pumps, truck pumps, garden engine pumps, windmill pumps, Blunt's Lotus pump, the Pendulum and Index pumps, counter pumps, 279—*Double-acting*, force-pumps proper, 279–283—The best, 279—Kinds characterized, Vose's hydropult, the Champion, 280—Ramsden's, reduction-cylinder pumps, patentees and manufacturers, 281–282—Author's agitator barrel pump, found most satisfactory, 282–283—Conduits, *frames, portage, and combinations of appurtenances*, 283—Johnson's cotton-spraying machine, 284—Jones', Binkley's, 285—Goodin's, Wolfram's, 286—Author's underspraying accessories, 288—Plan, skid, mixing, and straining funnel, 288—Adjustments of pipes, forks and nozzles, 289–297; fork modifications, 290–292—Pendent pipes, 292, conformability, lightness, cheapness, 292–293—Tube substances, 293—Author's A-frame machines, 293–297—Maximum width undersprayed, 295—Pipe adjustments to row widths, flexible systems superior, 296–297.

VI. Gravitational distributors, 297–309—*For liquid*, 297–302—Kinds, author's tripod automatic sprinkler, 297–298—Schank's sprinkler, Taylor's, 298—Robinson's, 299—Suction force-pumps and windlass elevators, 299—Bilge-pumps, 300—Horseback automatic sprinklers, watering-pot method, Willie's sprinkler, 300—Ramsey's, 301—Knapsack automatic sprinklers, 301—Gray's, Ruggle's, Townsend's, 302—Automatic hand-sprinklers, watering-pots afoot and on horseback, 302—*For dry poisons, sifters*, kinds, 302–309—Disadvantages, reciprocating sieve machines, hand-sieves, 303–304—Sifting bag, Hurd's sifter and blower, Goodheart's duster and sprinkler, 304—Rotary-sieve machines, 304–307—Robinson's duster and sprinkler, Davis' duster, Levy's, 305—Taylor's duster and sprinkler, 306—Reciprocating-stirrer sifters, Willie's, 307—Rotary-stirrer sifters, Young's, 307—Smith's, 308—Eldridge's, 309.

Chapter XIII:

Machinery and devices for the destruction of the worm—concluded. 310

VII. Insect manipulators, mechanical treatment, *dislodging, crushing or stifling* the worms or chrysalids, 310—Sweeping, knocking, or jarring off the worms; friction drags, fringes; beaters, 310—Collecting and despatching means, 311—Crushing, Helm's sweeper and crusher, 311—Ewing's sweeper and stifler, 312—*moths*, Wood-Smith's, 313—Iske's catching trays, 314—*Traps for the* 314–321—Kinds of lures, *lighttraps*, 314—Lewis's, McQueen's, Rigel's, 315—Walker's and others, 315–316—Lamps in motion, Leblanc's, Fordtran's, 316—*Bait traps*, Heard's, Garrett's, 317—*Traps combining light and bait*, author's net trap, 317–319, thought

2343. RILEY, C. V.—Continued.

CHAPTER XIII—Continued.

the best, 318—Indiscriminate killing wrong, the best bait, 319—Stith's trap, 319—Pugh's, Garrett's, 320—Binkley's, 321.

CHAPTER XIV:

History of the literature and bibliography........................ 322

History of the literature, 322—From 1802 to 1828, 322—From 1829 to 1847, 323—From 1848 to 1854, 324—From 1855 to 1871, 325—From 1869 to 1874, 326—From 1874 to 1878, 327—From 1878 to 1880, 328—From 1880 to 1881, 329—Bibliography up to and including the year 1881, 329-344.

CHAPTER XV:

Insects liable to be mistaken for *Aletia*.......................... 345

Confusion of *Aletia* with other moths, 345—With *Aspila virescens*, 345—Characters of the most important of these moths to be illustrated in this chapter, 345—List of these moths, 345—Account of *Anomis erosa* Hübner, 345—Its geographical distribution, 346—Structure of its eggs, 346—Distinguished from egg of *Aletia xylina*, 346—Its seasons, 346—Habits of larva, 346—Characters of moth, 347—Detailed description of egg, 348—Larva, 348—Pupa, 349—Seasons and food-plants, 349—Account of *Anomis texana* n. sp., 350—Habitat of *A. exacta*, 350—Of *A. texana*, 350—Larva distinguished from that of *Aletia xylina*, 350—Pupa distinguished, 350—Account of *Leucania unipuncta* Haworth, 350—Reference to discussions about this species, 350—Its geographical distribution, 351—Oviposition, 351—Food-habits of worms, 351—Pupation, 351—Number of broods, 351—Hibernation, 351—Account of *Aspila virescens*, 351—Synonymy, 351—Confounded with *Aletia xylina* only in pupa state, 351—Pupæ of the two species distinguished, 352—Food-plants of *A. virescens*, 352—Moth distinguished from that of *Aletia xylina*, 352—Account of *Drasteria erechtea* (Cramer), 352—Its geographical distribution, 352—Variations in size of moth, 352—Food-plants of larva, 352—Habits of moth, 352—Number of broods, 352—Oviposition, 353—Colors of larva, 353—Account of *Laphygma frugiperda*, 353—Its food-habits, 353—Synonyms, 353—Account of *Platyhypena scabra* (Fabr.), 354—Geographical distribution, 354—Food-plants, 354—Number of broods, 354—Reference to descriptions of larva, 354—*Euplectrus platyhypenæ* Howard, bred from larva, 354—Account of *Phoberia atomaris* (Hübner), 354—Reference to descriptions and figures of moth, 354—Food-plant of moth, 354.

CHAPTER XVI:

The boll-worm (*Heliothis armigera* Hübner)........................ 355

Introductory, 355—One of the foremost of our injurious insects, 355—Extent of its ravages, 355—Nomenclature, 357—Synonyms, 358—Popular names, 358—Geographical distribution, 358—Food-plants, other than cotton, 359—Corn, 359—Tomato, 361—Tobacco and other *Solanaceæ*, 362—*Leguminosæ*, 362—*Cucurbitaceæ*, 363—*Malvaceæ*, 363—Other food-plants, 363—Characters and transformations, 364—The egg, 364—The larva, 365—The pupa, 370—The imago, 371—Number of broods, 372—Hibernation, 373—Summary of the distinguishing points compared with *Aletia*, 374—Egg, 374—Larva, 374—Pupa, 374—Adult, 374—Natural enemies, 375—Remedies, 377—Early planting, 378—Low corn *vs.* high corn, 378—Fall plowing, 378—Destruction of the moths, 379—Lights

2343. Riley, C. V.—Continued.

CHAPTER XVI—Continued.

and poisoned sweets, 379—Hand-picking, 380—Poisoning, 381—Pyrethrum, 381—Bibliography, 382.

EXPLANATION TO PLATES 385

Plate I-III, 385—IV-VII, 386—VIII-XI, 387—XII-XVI, 388—XVII-XX, 389—XXI-XXV, 390—XXVI-XXVIII, 391—XXIX-XXXII, 392—XXXIII-XXXVIII, 393—XXXIX-XLII, 394—XLIII-XLVII, 395—XLVIII-LIII, 396—LIV-LVII, 397—LVIII-LXI, 398—LXII-LXIV, 399.

APPENDICES .... [1]

Preface to appendices .... [3]

APPENDIX I:

Report of H. G. Hubbard .... [5]

Report of observations made in 1881 upon *Aletia* and other insect enemies of cotton, in the State of Florida, [5]—Cotton injured more by *Dysdercus suturellus* than by *Aletia xylina*, [6]—And more by rust-mite than by either, [7]—Great destruction of *Aletia* eggs by *Trichogramma pretiosa*, [7]—Successions of broods of *Aletia*, [7]—Distribution of worms on plant, [8]—Tabular statement of periods of time occupied in each stage of growth, [10]—Locality of deposition of eggs on plant [12]—Proportions of light and dark colored worms, [12]—Effect of shade in protecting cotton, [12]—Periods of different stages, [13]—Copulation, [13]—Position of moths at rest, [13]—Experiments with poisons, [14]—Pyrethrum, [14]—London purple, [15]—Poisoning the moths, [15]—Yeast, [16]—The boll-worm, *Heliothis armigera* Hübn., [16].

APPENDIX II:

Report of Prof. R. W. Jones .... [17]

The cotton boll-worm, *Heliothis armigera*, [17]—Its importance, [17]—Food-plants, [17]—Natural history, [18]—The egg, [18]—The larva, [18]—Chrysalis, [19]—The moth, [19]—Weather, [19]—Natural enemies, [19]—Cotton army-worm, *Aletia xylina*, [19]—First appearance observed in 1880, [19]—Experiments with poisoned sweets, [20]—With adhesive sweets, [20]—Gradual disappearance of moths in October, [20]—Preparation of vegetable substances as insecticides, [20]—Pyrethrum, [21]—Experiments with Pyrethrum, [22].

APPENDIX III:

Report of J. P. Stelle .... [25]

First appearance of *Aletia xylina* and *Heliothis armigera* in Texas in 1880, [25]—Cotton blight, [25]—Its symptoms, [25]—Its causes, [26]—Boll rot, [26]—Its symptoms, [27]—Its cause [27]—The flare, [27]—Its symptoms, [27]—Its probable cause, [27]—Other food-plants than cotton for *Aletia*, [27]—None found for the larva, [27]—Many for the moth, [27]—Food of larva of *Heliothis armigera*, [28]—Annoyances to the cotton-worm, [28]—Common salt, [28]—Saltpeter, [28]—Road dust, [28]—Open spaces, [28]—Trees, [29]—Shade, [29]—Natural enemies, [29]—Birds, [29]—Ants, [29]—Other insects, [30]—The yeast ferment remedy, [31]—Pyrethrum powder, [31]—Other vegetable poisons, [32]—Arsenical poisons, [32]—London purple, [32]—Paris green, [33]—Arsenic, [33].

2343. RILEY, C. V.—Continued.

APPENDIX IV:

Reports of Dr. E. H. Anderson .... [37]

For 1880, [37]—Seasons and habits of *A. xylina*, [37]—Of *Heliothis armigera*, [37]—Localities of first appearance of *A. xylina* in the season, [37]—Reasons for this first appearance, [37]-[38]—Hibernation of this insect in some form, [38]—Causes of undue multiplication of the worms, [38]—Influence of ants on the number of worms, [38]—Habits of ants, [38]—Other insects gathering sweets from the cotton-plant, [39]—Jute growing amidst cotton has no effect on the worms, [39]—*Saturnia io* found eating cotton, [39]—An enemy of the cotton-worm found, [39]—Experiments with London purple, [39]—With Pyrethrum extract, [39]—With yeast, [40]—Eggs of insects found on cotton-leaf, [40]—Characteristics of season of 1880, [40]—Report for 1881, [40]—Diary of observations on issuance, egg-laying, and hibernation of moths, and on weather, from October 3 to December 31, [40]-[44]—Observations of *Heliothis armigera*, [41]-[43]—Report for 1882, [44]—Observations on ants and aphides, [45]—Abundance and sudden disappearance of *Laphygma frugiperda*, [45]—Scarcity of cotton-worms, [45]—Experiments with Pyrethrum, [45]-[48]—Weather in September, [46]-[47]—Scarcity of *Heliothis armigera* in cotton, [46]-[47]—Its preferred food-plants, [47].

APPENDIX V:

Cotton caterpillars in Brazil. By John C. Branner .... [49]

Historical accounts of the occurrence of cotton caterpillars in Brazil, [49]-[51]—Influence of weather on the appearance and abundance of cotton-worms, [51]—Localities in which worms first appear, [51]—Young cotton-plants most injured, [51]—Two species of cotton caterpillars have been confounded, [52]—Seasons and relative abundance of the two, [52]—Duration of their pupa state, [52]—Time of issue of moths, [53]—Number of broods, [53]—Enemies of the caterpillars, [53]—Preventive measures, [53]—Losses caused by caterpillars, [53]-[54]—*Heliothis armigera* scarcely known to attack cotton in Brazil, [54].

APPENDIX VI:

Report of Judge William J. Jones...................................... [55]

Obstacles to investigation in 1880, [55]—Exemption of scattered patches of cotton-plants from depredation, [55]—Answers to questions in Circular No. 7, [55]-[56]—Cotton killed by a fungus, [56]—Application of poisons to cotton, [56]—Effect of poisons upon eggs and larvæ, [56]—No other insects observed to be injurious, [56]—Use of lights recommended to destroy moths, [56]-[57].

APPENDIX VII:

Reports of consuls and consular agents on the cotton crop and its enemies in Mexico, Central and South America, and the West Indies .... [59]

Introduction, [59]—Circular letter of inquiry, [59]—Replies: from Merida, Mexico, [60]—From Tampico, Mexico, [60]—From Martinique, W. I., [60]—From Trinidad, W. I., [61]—From Manzanillo, Mexico, [61]—From Mazatlan, Mexico, [62]—From Bahia, Brazil, [63]—From Maricaibo, U. S. of Colombia, [64]—From Vera Cruz, Mexico, [65]—From Pernambuco, Brazil, [67]—From Bogotá, U. S. of Colombia, [68]—Notes on insects

2343. Riley, C. V.—Continued.

APPENDIX VII—Continued.

injurious to the cotton-plant in the Republic of Mexico, by D. H. Strother, U. S. consul-general, [70].

APPENDIX VIII:

Answers to Circular No. 7 .... [71]

From D. M. Hamilton, St. Francisville, West Feliciana Parish, La., [71]—From R. A. Lee, Evergreen, Ala., [73]—From J. M. Wolkom, Henderson, Tex., [74]—From P. S. Clarke, Hempstead, Waller Co., Tex., [75]—From L. D. Hoyt, Livingston, Sumter Co., Ala., [77]—From F. S. Shields, Lake Concordia, Concordia Parish, La., [79]—From G. E. Gillespie, M. D., Natchitoches, La., [81]—From H. O. Dixon, Jackson, Miss., [84]—From F. L. Yoakum, Larissa, Cherokee Co., Tex., [85]—From O. H. Perry, Perry Co., Ala., [86]—From J. W. Grace, Walterborough, Colleton Co., S. C., [86]—From F. M. McMeekin, Jamestown, Alachua Co., Fla., [87]—From H. P. Bee, San Antonio, Tex., [88]-[89]—From E. H. Anderson, Kirkwood, Miss., [90]—Condensed summary of the habits of the worm, from Dr. D. L. Phares, Woodville, Miss., [92].

NOTES .... [93]

Note 1 .... [95]

Hübner's description of *Aletia argillacea*, with translation, [95].

Note 2 .... [95]

Reasons for rejecting Hübner's description of *Aletia argillacea*, [95]—Wherein this description and the figures differ from *A. xylina*, [95]—Doubts of authors concerning *A. argillacea*, [95]—Search for the type of *A. argillacea*, [96]—Condition of the Sommer collection, [96]—How specimens of *A. xylina* are labeled therein, [96].

Note 3 .... [96]

No published, full, and complete description of the earlier states of *A. xylina* extant, [96]—Reprint of descriptive portion of Dr. C. W. Capers' article "On the cotton caterpillar," [97]—History of ravages of *A. xylina* prior to 1828, [97]—Sudden abandonment of cotton-plants, [97]—His description of moth, [98]—Egg, [98]—Larva, [98]—Smell of larva, [98]—Habits, [98]—Food-plant, [98]—Pupation, [98]—Description of pupa, [98]—Remedies, [99]—Detailed description of egg, [99]—Six stages of larva, [99]—Pupa, [100].

Note 4 .... [100]

Difference in structure of prolegs, distinguishing *Aletia xylina* from *Anomis texana*, [100].

Note 5 .... [100]

Resemblance of larva of *Plusia dyaus* to that of *Aletia xylina*, [100]—Proportion of light and dark specimens early and late in the season, [100].

Note 6 .... [100]

Cotton leaves blotched by young larva of *Spilosoma acrea*, [100].

Note 7 .... [100]

Larva of *Aletia xylina* fed on *Ipomœa commutata*, [100]—Abutilon and Phytolacca defoliated by different larvæ, [100]—Said to feed on "salve bush," [100].

Note 8 .... [100]

Structure of male genitalia of *Aletia xylina*, [100].

2343. RILEY, C. V.—Continued.

NOTES—Continued.

Note 9 .... [101]

Notice of Wm. Trelease's "Nectar: what it is and some of its uses," [101]—Teleology and dysteleology of nectar glands of cotton-plant, [101].

Note 10 .... [101]

Rapidity with which the broods of *A. xylina* follow one another in midsummer, [101]—Time of first appearance of worms, [101]—Number of broods, [101]—Prolificacy of moth, [101]—Importance of natural checks upon its increase, [101].

Note 11 .... [101]

Influence of winter temperature on time of first appearance of worms, [101].

Note 12 .... [101]

Theories of hibernation of *A. xylina,* [101]—Proof of hibernation of moth, [102]—importance of this proof, [102].

Note 13 .... [102]

Influence of latitude upon time of hatching of insects, [102].

Note 14 .... [102]

Number of broods of *A. xylina* previously recognized, [102].

Note 15 .... [102]

Possible food-plants of larva of *A. xylina,* [102]—There must be some besides cotton, [102]—Failure to find any other, [102]—Feeding of larva of *Anomis erosa* on *Urena lobata,* [102]—Value of fiber of *U. lobata,* [102]—Geographical distribution of *U. lobata,* [103]—Eggs and larva of *Anomis erosa* distinguished from those of *Aletia xylina,* [103]—Examination of malvaceous plants in herbarium of U. S. Department of Agriculture, [103]—Disadvantages of such an examination, [103]—Plants on which eggs were found in the herbarium, [103]—Petition for aid in obtaining evidence of the food-plant of *A. xylina* in the more northern States, [103]—List of malvaceous plants growing in these States, with localities, [103].

Note 16 .... [104]

Description of larva of *Aspila virescens,* [104]

Note 17 .... [104]

Travels of E. A. Schwarz in 1878 and 1879, [104]—Reference to published accounts of the results of his investigations and those of others on hibernation of *A. xylina,* [104].

Note 18 .... [104]

Platyhypena scabra, [104]—Characters of larva, [104]—Food-plants of larva, [104]—Pupation and hibernation, [104]—Characters of pupa, [104].

Note 19 .... [104]

Seasons of larva of *Phoberia atomaris,* [104].

Note 20 .... [104]

Criticism of paper by A. R. Grote on hibernation of *A. xylina,* [104]—Grote's arguments against hibernation, based on experience gained in the same regions which furnish arguments against the theory of annual immigration, [105]—Possibility of hibernation admitted by Grote, [105].

Note 21 .... [105]

Definition of northern and southern portions of cotton belt, [105].

2343. Riley, C. V.—Continued.

Notes—Continued.

Note 22 .... [105]

References to discussion of J. P. Stelle's claim to have first recommended publicly the use of Paris green for *A. xylina*, [105].

Note 23 .... [105]

References to descriptions and figures of brush-sacs of moths, [105].

Note 24 .... [105]

Worms worse in wet weather than in dry, because more protected from enemies, [105]—Localities of first appearance of worms are those of least molestation, [105].

Note 25 .... [106]

Appetite of swine for cotton-worms, [106]—Worms eaten by dogs and cats, [106].

Note 26 .... [106]

Reference to list of birds of southern States, [106].

Note 27 .... [106]

Range of English sparrow in United States, [106]—In hotter portions of the country it is confined to towns and villages, [106].

Note 28 .... [106]

Report by Dr. Geo. Marx on spiders found on cotton, [106]—Preliminary list of spiders which destroy insects noxious to agriculture, [106]—List of spiders observed to devour larvæ of *Aletia xylina*, [106]—How they capture their victims, [106]—Food-habits of *Theridula sphærula*, [107]—Observations on habits of *Oxyopes viridans*, by H. G. Hubbard, [107]—Ants captured by larvæ of a *Cicindela*, [107].

Note 29 .... [107]

Description of imago of *Trichogramma pretiosa*, [107].

Note 29*a* .... [107]

Metamymar n. g. and *M. aleurodis* n. sp., provisionally named, [107].

Note 30 .... [108]

Description of imago and larva of *Apanteles aletiæ*, [108].

Note 31 .... [108]

Apanteles aletiæ parasited by *Eupelmus* sp., [108].

Note 32 .... [108]

Description of imago of *Euplectrus comstockii*, [108].

Note 33 .... [108]

Description of imago of *Elachistus euplectri* n. sp., [108].

Note 34 .... [109]

Sarcophaga sarraceniæ distinct from *S. carnaria*, [109]—Points of difference between the *Sarcophagæ* of America and Europe generally, [109]—Additional specific characters of *S. sarraceniæ*, [109].

Note 35 .... [109]

Description of imago of *Tachina aletiæ*, [109].

Note 36 .... [109]

Description of imago of *Tachina fraterna*, [109].

Note 37 .... [109]

Differences between tachinid larva and that of *Sarcophaga*, [109]—Differences of puparia, [109]—Reference to description of larva of *Senometopia atropivora*, [110]; of larva and pupa of *Tachina villica*, [110]—Description of larva and puparium of *Sarcophaga sarraceniæ*, [110]; of larva of *Belvoisia bifasciata*, [110]—Difference of larva of *B. bifasciata* from that of *Tachina concinnata*,

2343. **Riley, C. V.**—Continued.

Notes—Continued.

[110]—Structure of spiracles in normal form of tachinid puparium, [110]—Description of the puparium, [110]; of puparium of *Belboisia bifasciata*, [111].

Note 38 .... [111]

Synonymy of *Cryptus conquisitor*, [111]—*C. pleurivinctus* erroneously given as a synonym of *C. annulicornis*, [111].

Note 39 .... [111]

Synonymy of *Cryptus samiæ*, [111].

Note 40 .... [111]

Description of larva and pupa of *Chalcis ovata*, [111]—List of Lepidoptera parasited by *Ch. ovata*, [111]—Variations in size of imago, [111].

Note 41 .... [111]

Synonymy of *Tetrastichus esurus*, [111]—Description of imago, [111].

Note 42 .... [111]

Description of imago of *Hexaplasta zigzag*, [111]—Difficulty of defining the families *Chalcididæ*, *Proctotrupidæ*, and *Cynipidæ*, [112]—Food-habits of these families, [112].

Note 43 .... [112]

Phora aletiæ not a true parasite, [112]—Habits of this species, [112].

Note 44 .... [112]

The vast majority of the moths attracted to light said to be males, [112]—If this is so, the usefulness of fires and lights as a remedy is almost nothing, [112].

Note 45 .... [112]

Antidotes for arsenical poisoning, [112].

Note 46 .... [112]

Non-fertilized blossoms destroyed by morning showers or spraying, [112]—When to make wet applications of poison, [112].

Note 47 .... [113]

Test of purity of Paris green, [113].

Note 48 .... [113]

Proportions of Paris green mixture, [113].

Note 49 .... [113]

Effect of kerosene and kerosene emulsion on cotton-plants, [113].

Note 50 .... [113]

Pyrethrum willemoti probably a synonym of *P. roseum*, [113]—Reference to Willemot's paper on *P. willemoti*, [113].

Note 51 .... [113]

Growth of productive pyrethrum industry in California, [113]—Effect of pyrethrum on warm-blooded animals, [113]—Pyrethrum recommended as a disinfectant and germicide, [113].

Note 52 .... [113]

Cost of production compared with price of pyrethrum, [113].

Note 53 .... [113]

Enemies of *Aletia xylina* killed by poisoning the worms, [113].

Note 54 .... [113]

Positiveness with which various plants have been recommended as insecticides, [113].

Note 55 .... [114]

Insects injuring dog-fennel, [114].

2343. **Riley, C. V.**—Continued.

Notes—Continued.

Note 56 .... [114]

Tests of spraying machinery, by Dr. W. S. Barnard, [114]—Difficulties in the use of machinery in irregularly-planted fields, [114]—Means of overcoming these difficulties, [114]—Conveyances for underspraying apparatus, [115]—Management of apparatus, [115]—Rapidity of service, [115]—Quantity of poison required, [115]—Success of stirrer-pump device, [115]—Construction of stirrer-pump, [115]—Construction of nozzle-pipes, [116]—Adjustment of these pipes, [116]—Success of Eddy-chamber nozzles, [116]—A closed system of pipes advisable, [116]—High pressure should always be used, [117]—Adjustment of descending pipes, [117]—Flexile joints recommended, [117]—Advantages of flexile pipes, [117]—Lifting of descending pipes in turning, [118]—Devices for lateral shifting of pipes, [118]—Summary of conclusions from experiments, [118].

Note 57 .... [119]

Recommendation to use Paris green in 1872, [119]—Extract from report made on this subject by J. P. Stelle, in 1880, [119]—Comment on the same, [120].

Note 58 .... [120]

Description of imago of *Anomis texana* n. sp., [120].

Note 59 .... [120]

Description of egg and pupa of *Drasteria erechtea*, [120].

Note 60 .... [121]

Reprint of J. W. Boddie's description, in 1850, of imago of *Phalæna zea* (*Heliothis armigera*), [121].

Note 61 .... [121]

Reprint of A. R. Grote's description of *Heliothis umbrosus*, [121].

Note 62 .... [121]

Remarks on specimens sent from Bahia, by R. A. Edes, in 1880, [121]—Characters of egg, larva, and pupa of *Anomis* sp., [121]—Insects found in cotton bolls, [121].

Note 63 .... [121]

Probably *Macrosila rustica* stated to feed on cotton, [121].

Note 64 .... [121]

Larvæ of *Aletia xylina* received from Vera Cruz, [121]—Recurrence of cotton-worms at irregular periods, [122].

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CONTENTS.

Experiments with insecticides 5
Report of experiment sat La Fayette, Ind. By F. M. Webster 9
Report of experiments at Ames, Iowa. By H. Osborn 23
Report of experiments at Trenton, N. J. By T. Bennett 27

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Remarks made at a meeting of the A. A. A. S.; books useful for beginners.

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Occurrence of *Mezium americanum* in old hay.

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Remarks on collection of insects made at Point Barrow, Alaska; prevalence in Arctic regions of species common to America and Europe; occurrence of *Urocerus flavicornis* in Alaska.

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Phytophagic habits of the genus *Isosoma*; *I. grande* observed ovipositing.

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Names *Acrobasis vaccinii* as the well-known cranberry fruit-worm.

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States that *Rhyssa* [= *Thalessa*] *lunator* is parasitic and not lignivorous.

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Refers to O. Lugger's statements in regard to the habits of *Tiphia* and *Rhipiphorus* as manifestly incorrect.

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Disfigurement of buildings by the insects and spiders attracted to the electric light on the dome of the Capitol.

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Parasitic habits of *Aleochara anthomyiæ* [= *nitida*].

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TABLE OF CONTENTS.

INTRODUCTION 207

Silk-culture, 207—Review of the divisional work in silk-culture, 207—Necessity for a home market for cocoons, 208—Proposed establishment of a filature at Washington, 208—Silk culture in France, 209—Destructive locusts, 209—Injurious insects of the year, 209—Correspondence of the Division, 210—Work of the Division in economic ornithology, 210—Establishment of an apicultural station, and the work of the Division in apiculture, 211—Work of other divisional agents, 212—Relations of the Division to the National Museum, 213—Publications of the Division, 213—Office force, 213.

SILK-CULTURE 214

General work of the division, 214—Distribution of eggs, 214—States in which greatest interest is felt, 214.

Distribution of mulberry trees 214

Number distributed, 214—Danger of indiscriminate distribution, 214—Osage orange, 214—Russian mulberry, 215.

Distribution of eggs 215

Variety distributed, 215—Designation of races, 215.

Home-raised *vs.* imported eggs 215

Feeling against importation, 215—Reasons for importation last year, 215—Provisions for the next distribution, 216—Eggs rejected, 216—Labor involved in silk-culture, 216.

Establishing of filatures—Cost of producing reeled silk 216

2363. RILEY, C. V.—Continued,

SILK-CULTURE—Continued.

Importance of filatures, 216—Establishing of stations, 217—Work at Philadelphia station, 217—Work and results at New Orleans filature, 217—The Serrell automatic silk reel, 218—Application of the saving of this reel to New Orleans figures, 219.

Work on the Pacific coast 219

Last season's experimental crop, 219—Incorporation of the Ladies' Silk-Culture Society of California, 219—The station at Piedmont, 219—Proposed work at the station, 220—Work of the State board, 220—Attempt to form a stock company, 220.

On the precautions necessary in the production of pure silk-worm eggs and in properly wintering them 221

Pasteur's classification of diseases, 221.

Flaccidity (Flacherie) 221

Symptoms and consequences, 221—Action of worms, 221—Color, 221—Odor, 221—Nature and treatment, 222—Microscopic diagnosis, 222—The bacillus of flaccidity, 222—Examination of the chrysalis, 222.

Pébrine 223

Symptoms, 223—The black spots, 223—Microscopic diagnosis, 223—Appearance of chrysalis, 224—Tests for the determination of pébrine, 224—Difficulty of using the worm for test, 224—Advantage of using the moth, 224—Isolation and examination of the moths, 224—Maillot's method, 224—Examination of chrysalides, 224—Selection of cocoons, 225—Moth cells, preparation, 225—Fastenings for cells, 225—Preparation of moth for examination, 226—The corpuscle of pébrine, 226.

Wintering the eggs 227

Colors of eggs, 227—The micropyle, 227—Proper temperature and humidity, 227—Hibernating boxes, 228—Acknowledgments, 228.

MISCELLANEOUS INSECTS 228

Destructive locusts or "grasshoppers," *Acrididæ* 228

Unusual damage, 228—The Rocky Mountain locust, 228—Probabilities for 1886, 229—The California migratory locust, 229—Abundance the present year, 229—The destructive species in previous years, 230—Geographical range, 230—Characters of the species, 231—Remedies, 232—New remedy, 232—Non-migratory species, 232—The red-legged locust, 232—The differential locust, 233—The two-striped locust, 233—The lesser locust, 233.

The periodical Cicada, *Tibicen septendecim* 233

Preparation of a Bulletin, 233—A seventeen-year and a thirteen-year race, 234—Our announcement in 1868, 234—Dr. Smith's manuscript, 234—Dr. Phares's earlier discovery, 234—Two distinct forms or varieties; specific value of the different forms, 234—First discovery, 234—Points of difference, 235—How the species should be catalogued, 235—The long period of underground development, 235—The food of the larva, 236—Method of burrowing of the larva, 237—The transformations, 237—Rising of the pupæ, 237—Five phases of ecdysis, 238—Time required for transformation, 238—The Cicada *vs.* civilization, 238—Influence of domestic animals, 238; of building of towns, 238; of the English sparrow, 238—Song notes of the Cicada, 239—Notes of other insects, 239—First or phar-r-r-r-aoh note, 239—Second note or "screech," 240—Third or "chirping" note, 240—Other notes,

2363. RILEY, C. V.—Continued.

MISCELLANEOUS INSECTS—Continued.

240—Variation in time of appearance, 240—Enemies of the Cicada, 241—Supposed sting of the Cicada, 241—Oviposition, 242—Injury caused to fruit trees; remedies and preventive measures, 242—Small injury in larva state, 243—Destruction of the insects as they issue from the ground, 243; by Pyrethrum powder, 243; by Pyrethrum water, 243; by kerosene emulsion, 244—Experiments with substances that kill by thwarting exuviation, 244—Carbolic acid, 244—Acetic acid, 245—Alcohol, 245—To prevent ovipositing, 245—Kerosene emulsion, 245—Consideration of the two 1885 broods, 246—Circular letter, 246—Brood VII, 247—Brood XXII, 248—Points of contact of the two broods, 249—Geographical distribution of Brood VII, 250—Distribution of Brood XXII, 251—Summary of distribution and future appearance of different broods, 252—Influence of climate upon the races, 254—Experiment in the transfer of eggs, 255—Persons assisting, 255—Description of the placing of the different lots of eggs, 256—The Cicada in 1886, 257.

The leather beetle, or toothed Dermestes, *Dermestes vulpinus*......... 258

Injury to boots and shoes, 258—History of its occurrence at St. Louis, 258—Unrecorded points in its habits and natural history, 259—Food of larvæ, 259—The eggs, 259—Growth of larvæ, 260—The pupa, 261—The beetle, 261—Litigation growing out of its injuries, 261—History of the Savannah case, 262—Remedies, 263—Care and cleanliness, 263—Use of poisons, 263—Descriptive, 264—Mature larva, 264—Differences between young and old larvæ, 264.

The garden web-worm, *Eurycreon rantalis*......................... 265

Great damage the present year, 265—A wide-spread species, 265—Popular descriptions of different states, 265—Former injuries, 266—Localities of damage in 1885, 266—Food-plants, 267—Habits and natural history, 267—Number of annual generations, 267—Habits of larvæ, 268—Cocoon, 269—Natural enemies, 269—Remedies, 269—Arsenical poisons, 269—Machine for jarring the worms from the plants, 270.

The dark-sided cut-worm, *Agrotis messoria* 270

Injury to onions; new habit, 270—Habits and natural history, 270—Number of broods, 270—Hibernation, 271—Remedies, 272—Treatment of land in spring, 272—Poisoned balls, 272—Kerosene emulsions, 272—Report of John B. Smith, 273—Report of Thomas Bennett, 274.

The strawberry weevil, *Anthonomus musculus*...................... 276

Past history, 276—In Maryland, 276—In Missouri, 276—In Michigan, 276—Injury in 1885, 276—Damage on Staten Island, 276—Habits and natural history, 277—Mr. Smith's observations, 277—Diversity of habit in the genus, 278—Natural history of other species of *Anthonomus*, 278—Inquilinous species, 279—Speices having different habits, 279—Remedies, 279—Wolf's soap, 279—Kerosene emulsion, 280—Pyrethrum, 280—Repellants, 280—Characters and synonomy, 280—Descriptive, 281—Variations of *A. musculus*, 282—Comparative differences between *A. musculus* and *A. suturalis*, 282.

The pear midge or pear Diplosis, *Diplosis pyrivora*.................. 283

2363. RILEY, C. V.—Continued.

MISCELLANEOUS INSECTS—Continued.

Decisive steps for eradication recommended, 283—Life-history and habits, 283—Laying of eggs and growth of larvæ, 283—Habits of larvæ, 284—The cocoon, 284—One annual generation; dates of issuance of adults, 284—Parasites, 285—Remedies, 285—Is it an introduced species?, 285—Reasons for so considering it, 285—Schmidberger's account of the European pear midge, 286—Dr. Joseph Mik's opinion, 287—Descriptive, 287—Imago, 287—Larva, 288—Pupa, 288—The classificatory value of the genitalia, 288.

REPORTS OF AGENTS 289

Report on the locusts of the San Joaquin Valley, Cal. By D. W. Coquillett 289

Letter of transmittal, 289—Letter of instructions, 289—Location, 290—Work of the locusts in general, 290—Species most destructive, 291—The devastating locust, 291—The ash-colored locust, 296—292—Where did these locusts hatch?, 292—Consideration of surrounding topography, 293—How the young locusts may be distinguished, 293—Influence of submersion on hatching, 294—Cause of the abundance in this valley in 1885, 294—Early hatching, 294—Lack of rain, 294—The differential locust, 295—Abundance, 295—Egg-pod, 295—Oviposition, 296—Flight, 296—The yellow locust, Abundance, 296—Flight, 296—Cannibalism, 296—Oviposition, 297—Other species of locusts, 297—Table showing relative abundance, 297—Injury committed by the locusts, 297—To grape-vines, 298—To grain-fields and vegetable-gardens, 298—Natural enemies, 298—Birds and poultry, 298—Wasps, 298—Mites, 299—Flies, 299—Remedies, 299—Collecting in windrows of dry stems and then burning, 299—Rolling, 300—Kerosene emulsion, 300—Burning sulphur, 300—Horse troughs, 300—Bran, arsenic, and sugar trap-poisoning, 300—Buhach, 302.

Report on the abundance of the Rocky Mountain locust in 1885. By L. Bruner 303

Letter of submittal, 303—The great abundance of native species, 303—Direction of flight of the Rocky Mountain species, 304—Probabilities for 1886, 305—Effect of weather upon probabilities, 305—Scarcity of parasites, 305—Abundance of *Melanoplus atlanis* and *Camnula pellucida*, 306—List of locusts noticed in larger numbers than usual, 307.

Notes on locusts at and about Folsom, Cal. By A. Koebele 308

Methods adopted by the Natoma Company, 308—Manner of flight, 309—Time of appearance, 309—Losses, 310—Parasites, 310—Poultry, 310.

Insects affecting fall wheat. By F. M. Webster 311

Isosoma tritici Riley and *I. grande* Riley, 311—Notes of breeding, 312—Selection of plants, 314—Facts concerning oviposition, 314—Influence of temperature, 314—No males found, 315—The grain Sphenophorus, 315—Found in rye and wheat, 315—Oviposition, 316—Damage to straw and roots, 316—The pupa, 316—Dates of emergence, 316—The white-grub, 316—Distinguished from *Sphenophorus*, 317—The tarnished plant bug, 317—Found feeding on kernels of wheat, 317—*Euschistus fissilis*, 317—*Deræocoris* [= *Calocoris*] *rapidus*, 317—*Diedrocephala flaviceps*, 318—The eggs, 318—Injurious to oats, 318—The chinch-bug, 318—Abundance in fall wheat, 318—On bottle-grass, 318—Parisitized by *Mermis*, 318—The wheat midge, 318—Breeding notes, 318—Date of emergence, 319.

2363. RILEY, C. V.—Continued.

REPORTS OF AGENTS—Continued.

Third report on the causes of destruction of the evergreen and other forest trees in northern New England. By A. S. Packard 319

General review, 320—Condition of the spruce on the coast of Maine, 321—Exemption from insect attack, 321—Condition of the hackmatack in 1885, 321—Verification of last year's predictions, 322—The white-pine weevil, 322—Eggs, 322—Larva, 323—Pupa and its cell, 323—Distinguished from other species, 323—Life-history in brief, 324—Effects of its work, 324—Prevention, 325—The spruce Epizeuxis, 325—Discovery of food-plant, 325—Compared with other species, 325—Descriptive, 326—The spruce plume-moth, 326—Habits, 326—Descriptive, 326—The pine Pheocyma, 327—The evergreen Cleora, 327—Habits, 327—Descriptive, 327—The fir Paraphia, 328—Descriptive, 328—The spruce Therina, 328—Descriptive, 329—The pine Therina, 329—The pine Amorbia, 329—The V-marked Cacœcia, 329—Habits, 329—Descriptive, 330—The hickory Eccopsis, 330—Habits, 330—Descriptive, 331—The variegated Eccopsis, 331—Descriptive, 331—The white-heart hickory Gelechia, 331—Habits, 332—Descriptive, 332—The willow Teras, 332—Descriptive, 332—The purple willow Gracilaria, 332—Habits, 332—Descriptive, 333.

Report on experiments in apiculture. By N. W. McLain 333

Letter of submittal, 333—Economy in the production of wax, 334—Experiments in wax-feeding, 334—Device for feeding sugar syrup and for other purposes, 334—Description, 334—Wintering bees, 335—Loss from thirst, 335—"Roaring in the hive," 336—Device for furnishing water, 336—Bees *vs.* fruit, 336—House built for experiment, 336—Details of experiments, 337—Conclusions, 338—Fruits used, 339—Experience of Richard Rees, 339—Artificial fertilization, 339—Desirability of accomplishing it, 339—Recent experiments, 340—Experiments with larval and pupal queens unsuccessful, 340—Experiments with imago queens, 341—Conclusions and ground for hope, 342—Bee forage, 342—Improved races, 342—Importance of apiculture, 342—Statistics, 343—Necessity and scope, 343—Desirability of accurate crop reports of apiarian products, 343.

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CONTENTS.

Report on the production and manufacture of Buhach. By D. W. Coquillett 7

Additions to the third report on the causes of the destruction of the evergreen and other forest trees in northern New England. By A. S. Packard, jr 17

The periodical Cicada in southeastern Indiana. By A. W. Butler 24

Notes of the year 32

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2367. RILEY, C. V. Some popular fallacies and some new facts regarding *Cicada septendecim* L. <Proc. Amer. Assoc. Adv. Sci. for 1885, [August], 1886, v. 34, p. 334.

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Criticism of the observations of G. D. Hulst; summary of the method of oviposition of *Pronuba yuccasella*; pollination of *Yucca* by the same.

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Means against *Coccidæ*.

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2376. RILEY, C. V. Bumble-bees *vs.* red-clover. <Rural New-Yorker, 23 April, 1887, v. 46, p. 270. S.-b. No. 61, pp. 36–37.

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2378. **Riley, C. V.** Our shade trees and their insect defoliators. Being a consideration of the four most injurious species which affect the trees of the capital; with means of destroying them. <Bull. No. 10, Div. Ent. U. S. Dept. Agric. [7 May], 1887, 69, pp. 27 figs.

CONTENTS.

- LETTER OF SUBMITTAL 5
- INTRODUCTION 7
- FOUR PRINCIPAL LEAF-EATERS 8
  - The imported elm leaf-beetle, *Galeruca xanthomelæna* 8
    - An importation from Europe 8
    - Habits and natural history 8
    - Remedies 11
    - More recent experience at the Department 14
      - Past history of the elms in question, 14—Condition and characteristics of the grove in 1882 and 1883, 14—Extent of injury in 1882 and 1883, 14—Preferences of the elm beetles for certain varieties, 15—Effects of arsenical poisons on insect and plant, 15—Preventive effects of the poison, 16—Treatment with London purple, 17—Preparation of the poison, 17—Effects of the mixture, 17—Treatment with Paris green, 18—Mechanical means of applying the poison, 19.
  - The bag-worm, *Thyridopteryx ephemeræformis* 22
    - Habits and natural history 22
      - The eggs, 22—The larva and its bag, 23—Pupation, 25—The imago or perfect insect, 25.
    - Geographical distribution 26
    - Food-plants 27
    - Enemies 27
  - The white-marked tussock-moth, *Orgyia leucostigma* 29
    - Habits and natural history 29
      - The eggs, 29—Development and characters of the larva, 29—Habits of the larva, 30—Pupation, 30—The imago, 30—Hibernation, 31—Number of annual generations, 31.
    - Food-plants 31
    - Natural enemies and parasites 31
    - Geographical distribution 33
  - The fall web-worm, *Hyphantria cunea* 33
    - Natural history 33
      - Limitation of broods, 33—The eggs, 34—The larva, 35—Pupa and cocoon, 36—The moth, 36.
    - Injury done in 1886 37
    - Proportionate injury to different plants and shade trees 40
    - Peculiar effect of defoliation upon some plants 42
    - Enemies of the web-worm other than insects 43
    - Predaceous insect enemies 44
    - Fungus diseases of the web-worm 46
      - Experiments to obtain percentage of diseased caterpillars, 47.

2378. **Riley, C. V.**—Continued.

Contents—Continued.

The parasites of the web-worm 48

Telenomus bifidus Riley, 48—*Meteorus hyphantriæ* Riley, 49—*Apanteles hyphantriæ* Riley, 50—*Limneria pallipes* Prov., 51—*Tachina* sp., 52.

SUMMARY OF THE HABITS OF THE FOUR SPECIES 53
REMEDIES AND PREVENTIVE MEASURES 55
  Winter work 55
  One simple preventive remedy for all 55
  Pruning and burning 59
  Mulching 60
  Influence of tree-boxes 60
  Whitewashing of trunks 61
BIRDS: THE ENGLISH SPARROW 62
THE FUTURE OF OUR TREES. PRUNING 63
TREES WHICH ARE UNINJURED 64
GOOD AND BAD EFFECTS OF OUR TREES 64
PROSPECTS THE COMING SEASON. CONCLUSION 65
INDEX 67

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Report of address made before the New York farmers, 10 March, 1887; ravages and means against *Galeruca xanthomelæna, Thyridopteryx ephemeræformis, Orgyia leucostigma* and *Hyphantria cunea.*

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The female of *Orgyia leucostigma* undergoes four molts, the male undergoes three; tendency of individual larvæ of all orders to vary from the normal number in the species; whenever there is a discrepancy in size of the sexes the smaller undergoes a less number of molts; number of molts when not sexual dependent on food supply; molting correlated with rate of growth and nutrition.

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2382. **Riley, C. V.** Reports of observations and experiments in the practical work of the division, made under the direction of the entomologist. <Bull. No. 13, Div. Ent. U. S. Dept. Agric. [3 June], 1887, 78 pp., 4 figs.

CONTENTS.

Introduction 7
Report on locusts in Texas in the spring of 1886. By L. Bruner 9
Fourth report on insects injuring forest and shade trees. By A. S. Packard, jr 20
Report on Nebraska insects. By L. Bruner 33
Tests with insecticides on garden insects. By W. B. Alwood 38
Report on Ohio insects. By W. B. Alwood 48

2382. **Riley, C. V.**—Continued.

Contents—Continued.

A record of some experiments relating to the effect of the puncture of some hemipterous insects upon shrubs, fruits, and grains, 1886. By F. M. Webster 54
Notes from Missouri for the season of 1886. By M. E. Murtfeldt 59
Apicultural experiments. By N. W. McLain 66

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Ravages and means against *Gryllus* sp., destructive to cotton, peas, tobacco, sweet and Irish potatoes.

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Letter to I. A. Wilcox; recommends bisulphide of carbon as a means against *Ægeria impropria*.

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Means against cut-worms.

2388. **Riley, C. V.** Reports of observations and experiments in the practical work of the division made under the direction of the entomologist. <Bull. No. 14, Div. Ent. U. S. Dept. Agric. [3 August], 1887, 62 pp., 1 pl., 4 figs.

CONTENTS.

Introduction 7
Report on insects injurious to garden crops in Florida. By W. H. Ashmead 9
Report on buffalo gnats. By F. M. Webster 29
Native plums. How to fruit them. They are claimed to be practically Curculio-proof. By D. B. Wier 39
The Serrell automatic silk-reel. By P. Walker 52

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CONTENTS.

Letter of submittal 5
Introduction 7
The scale-insects of the orange in California, and particularly the Icerya or fluted scale, etc 9
Notes on Icerya—Its probable origin the Islands of Bourbon and Mauritius 27
The use of gases against scale-insects 35

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TABLE OF CONTENTS.

Introduction 459
Fruit interests of the Pacific coast, 459—Cottony cushion-scale (*Icerya purchasi*), 459—Kerosene emulsions, 459—Caustic soda

2394. RILEY, C. V.—Continued.

TABLE OF CONTENTS—Continued.

and caustic potash, 459—Remedy for the California red-scale (*Aspidiotus aurantii*), 460—Experiments made by Mr. Coquillett and Mr. Koebele, 460—Emulsifying oil, 460—Southern buffalo gnats, 461—Results of investigations made on the Southern buffalo gnat and the turkey gnat, 461—Common fall web-worm (*Hyphantria cunea*), 461—Imported elm-leaf beetle, 461—Spraying appliances, 461—Alternation of generation with the joint-worms, 462—Injurious insects of the year, 462—Hop Aphis (*Phorodon humuli*), 462—Serrell automatic reel for silk, 462—Apicultural station at Aurora, Ill., 462—Work of the Division of economic ornithology; 462—International exhibition of machinery and contrivances for applied remedies against fungi and insects at Florence, 464—Publications of the Division during the year, 464—Proposed publications, 464—Work of field agents, 465—Office force, 465.

MISCELLANEOUS INSECTS 466

The cottony cushion-scale, *Icerya purchasi* 466

Introductory, 466—Geographical distribution, 466—In Australia, 466—In Cape Colony, 467—In New Zealand, 467—Importation of the species into California, 468—Its spread and present limitation in California, 469—Food-plants, 471—Original food-plant of *Icerya purchasi*, 471—Its food-plants in South Africa, 471—Its food-plants in New Zealand, 472—Its food-plants in California, 472—Characters and life-history, 474—The egg, 475—The female larva, first stage, 475—Female larva, second stage, 476—Female larva, third stage, 476—The adult female, fourth stage, 477—The egg-sac, 478—The male larva, probable second stage, 478—Male larva, third stage, 479—The male pupa and cocoon, 479—The adult male, 480—Rate of growth of the different stages, 481—Habits, 481—Exudation of the honey-dew, 482—Mode of spread and distribution, 483—Natural enemies, 484—Birds, 484—Predaceous insects, 484—Parasites, 487—Remedies and preventive measures, 488—Importation of parasites, 488—Preventive action, 489—Spraying with insecticides, 489—Fumigating, 491—Bandages around the trunk, 491—Conclusion, 491.

Buffalo gnats 492

The Southern buffalo gnat, *Simulium pecuarum* 493

Geographical distribution, 493—Early history, 493—Time of appearance, 494—Duration of an invasion, 494—Character of a swarm, 495—Mode of attack, 496—Animals injured, 497—Effect of the bites, 497—How animals protect themselves, 498—Preventives, 499—Remedies for the bites, 501—Attacking man, 501—Damage done in various years, 501—Popular opinions about the early states of the buffalo gnats, 502—Habits and natural history, 503—The egg, 503—The larva, 505—Habits of the larvæ, 505—Food of the larvæ, 507—Pupa and cocoon, 508—The imago, 509—Number of broods, 509—Enemies of the buffalo gnat, 510—Descriptive, 511—*Simulium pecuarum* n. sp., 512—*Simulium meridionale* n. sp., 513—Remedies tried and proposed against the larvæ, 514—Overflows and buffalo gnats, 515.

2394. RILEY, C. V.—Continued.

TABLE OF CONTENTS—Continued.

The fall web-worm, *Hyphantria cunea* 518

Natural history, 518—Limitation of broods, 518—The eggs, 519—The larvæ, 519—Pupa and cocoon, 520—The moth, 520—Injury done in 1886, 521—Proportionate injury to different plants and shade trees, 522—Peculiar effect of defoliation upon some plants, 525—Enemies of the web-worm other than insects, 525—Predaceous insect enemies, 526—Fungus disease of the web-worm, 527—Experiments to obtain percentage of diseased caterpillars, 529—True parasites of the web-worm, 530—Secondary parasites, 530—The Telenomus egg-parasite, 531—The Meteorus parasite of the web-worm, 531—The Microgaster parasite of the web-worm, 533—The Limneria parasite of the web-worm, 534—The Tachina parasite of the web-worm, 534—Remedies, 535—Pruning and burning, 535—Mulching, 536—Arsenical poisons, 536—Emulsions of kerosene, 538—Naphtha, 538.

Joint-worms, *Isosoma* sp 539

The common joint-worm, 539—Its occurrence in Virginia in 1885, 539—Other recent appearances, 540—Its identity with *I. nigrum* Cook, 541—Parasites, 542—The wheat-straw Isosoma, 542—Dimorphism of *I. tritici* and *I. grande*, 543—Occurs in California, 544—In Kansas, 545—Parasites, 546.

SILK CULTURE 546

Appropriations for the current year, 546—Establishment of a filature at Washington, 546—Osage orange *vs.* mulberry, 546—Rendition of osage cocoons, 547—Mr. Serrell's opinion, 547—Satinage, 547—The Serrell reel; cost of work up to the present time, 548—Expenses tabulated, 548—Chances for improvement, 549—Distribution of eggs, 549—Reasons for purchasing foreign eggs, 549—Improper choking of cocoons, 550—A simple apparatus for choking, 551—Cocoons produced in the United States in 1886, 551—Tabulated by States, 552.

REPORT OF AGENTS 552

Report on remedies for the cottony cushion-scale. By D. W. Coquillett 552

Letter of transmittal, 552—General considerations, 553—Caustic potash, 554—Caustic soda, 555—Hard soap, 555—Soft soap, 555—Kerosene emulsions, 556—Tobacco, 556—Sheep dip, 557—Tobacco soap, 557—Vinegar, 557—Paris green, 557.

Report upon supplementary experiments on the cottony cushion-scale, followed by a report on experiments on the red-scale. By A. Koebele 558

Letter of transmittal, 558—Introductory, 558—Soap solutions, 558—Preparation of soap, 559—Resin compounds, 559—Lye solution, 560—Bisulphide of carbon, 560—Kerosene emulsion, 560—Experiments, 560—Experiments on fumigation with bisulphide of carbon, 569—Experiments on red-scale (*Aspidiotus aurantii*), 569.

Insects affecting small grains and grasses. By F. M. Webster 573

Letter of transmittal, 573.

Insects affecting fall wheat 573

The wheat-straw Isosoma (*Isosoma tritici*, Riley), 573—The American Meromyza (*Meromyza americana*, Fitch), 574—The companion wheat fly (*Oscinis?* sp.), 574.

2394. Riley, C. V.—Continued.

Table of Contents—Continued.

Insects affecting barley.. 575

The white-grub (*Lachnosterna fusca*, Frohl.), 575—The barley root-louse (*Schizoneura* sp.), 575—The grain Aphis (*Siphonophora avenæ*, Fab.), 576.

Insects frequenting or depredating upon buckwheat.............. 576

Supposed exemption from insects, 576—Mode of observation, 576—Signification of symbols, 576—List of insects, 576.

Insects affecting timothy, 578.

The glassy cut-worm (*Hadena devastatrix*, Brace), 578—Outbreak in Indiana in 1886, 578—Doubt as to species concerned, 578—Method of work, 579—Traveling, 579—Parasites, 579—Damage, 580—Condition of fields in October, 580—The grain Sphenophorus (*Sphenophorus parvulus*, Gyll.), 580.

Insects affecting white-clover.................................. 580

The flavescent clover weevil (*Sitones flavescens*, Allard), 580—Infests alsike, 580—Mode of attack, 580—Distribution, 580—Eggs and larvæ, 580—Hibernation, 580—Summary of life-history, 581—The clover-stem maggot (*Oscinis* sp.), 582—Descriptive, 581—Time and place of oviposition, 581—Number of broods, 581.

Report on experiments in apiculture. By N. W. McLain............ 583

Letter of transmittal, 583—The "quaking disease," 583—Nature of the disease, 583—Odor of infested hives, 583—Treatment with brine and soda, 583—Another form of the disease, 584—The foul-brood disease, 584—It is contagious, 584—Live pollen the medium, 584—Treatment, 584—Results of treatment, 585—How the disease spreads, 587—The control of reproduction, 587—Difficulties, 587—Experiments in 1885, 588—Device for holding the queen, 588—Differences in drones, 589—Proportion of impotent individuals, 589—Mr. Baldwin's experiments at Clarksville, Mo., 589—Comments, 590—Fertilization in confinement, 590—Apparatus, 590—Results of experiments, 590—Proposed experiments, 591.

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TABLE OF CONTENTS.

INTRODUCTION 48

Damage by the chinch-bug, 48—Codling-moth, 48—Hop Aphis, 48—Work of Division in regard to silk-culture in the past year, 49—Recent experiments on the fluted or cottony cushion-scale of California, 49—Hydrocyanic acid gas and arseniuretted hydrogen, 49—Possible introduction into California of the parasites of Icerya from Australia, 50—Recent experiments on other scale-insects, 50—Professor Osborn's report on the more important insects of the season in Iowa, on the chinch-bug, on hop insects in Wisconsin, 50—Mr. Bruner's report, 50—Mr. Webster's report on the southern buffalo-gnat, 50—The year as a whole one of comparative immunity, 50—Apiculture, 50.

THE CHINCH-BUG, *Blissus leucopterus*. By L. O. Howard.............. 51

Introductory, 51—Past history, 51—Earliest appearance, 52—First described by Say, 52—Called "Mormon louse" in Illinois in 1840, 52—First recorded appearance in Missouri, Iowa, Indiana, and Wisconsin, 52—Its damage in the years 1864 and 1868, 52—Estimates of loss in 1871, 52—Great injury in 1874 in Missouri and adjoining States, 52—First injurious appearance in New York in 1882, 53—Damage in succeeding years, 53—Geographical distribution, 53—Indigenous east of the Rocky Mountains, north and south, 53—States in which it does the greatest damage, 53—In Cuba, 54—West of the Rocky Mountains, 54—Specimens from California and Mexico, 55—Injury during 1887, 55—Review of localities and damage this season by the statistician of the Department, 55—Table showing losses in States most damaged, 56—Summary of counties in these States, 57—Food-plants, 57—Cultivated grains and cultivated and wild grasses, 57—Rice, 58—Polygonum, 58—Stages of growth—Descriptive, 59—Egg, 59—Larval stages, 59—Pupa, 59—Imago, 59—Original description, 59—Le Baron's description, 59—Fitch's varieties, 60—Riley's variety *melanosus*, 60—A new variety, 60—Number of broods and hibernation, 60—First accurate statement, 60—Hibernation, 60—Influence of severe cold, 61—Odor reveals hiding places, 62—Habits, 62—Flight, 62—Oviposition, 62—Young larvæ, 63—Growth, 63—Migration, 63—Habits on corn, 64—Preparations for hibernation, 64—Erroneous statement as to oviposition, 65—Exceptional habits, 65—Natural enemies and diseases, 65—Insect enemies, 65—No true internal insect parasite yet known, 65—A possible hair-

2418. RILEY, C. V.—Continued.

THE CHINCH-BUG—Continued.

worm parasite, 65—Lady-bird enemies, 65—Weeping lace-winged fly, 66—True bugs which prey upon it, 66—Inefficacy of lady-bugs when plant-lice are present, 66—Vertebrate enemies, 67—Common quail, 67—Other birds, 67—Quail laws, 67—Diseases, 68—Dr. Shimer's account of his observations on the epidemic in 1865, 68—Professor Forbes' investigations, 69—His studies of bacterial diseases of other insects, 70—Professor Riley's comments, 70—Wet weather and chinch-bug, 71—Professor Forbes' experiments, 71—Comments, 71—Wet weather and the disease, 72—Dr. Thomas' theory, 72—Professor Riley's comments, 73—An anonymous prediction, 73—Table of temperature and rain-fall in North Carolina, 74—Official records of precipitation in chinch-bug States for 1885, 1886, and 1887, 74—Remedies and preventives, 75—Earlier recommendations, 75—Preventions, 75—Clean cultivation, 75—Diversified farming, 75—Rotation of crops, 76—Early sowing and manuring, 76—Rolling, 76—Sowing an unattractive crop with wheat, 76—Direct winter remedies, 77—Burning, 77—Fall plowing and harrowing, 77—Gas lime, 77—Trapping, 77—Trampling, 77—Direct summer remedies before migration, 77—Irrigation, 78—Burning, 78—Prevention of migration—Direct remedies during and after migration, 79—Ditching, 79—Tarred boards or tar alone, 80—Sowing strips of plants distasteful to the bugs around the fields to be protected, 80—Sowing strips of favored food around the fields to be protected, 80—Hot water and soap-suds, 80—Kerosene emulsion, 80—Professor Forbes' experiments, 81—Mr. Hubbard's formula, 81—Professor Atkinson's test, 81—Professor Osborn's experiments, 82—Mr. Warren's letter, 83—Bogus chinch-bugs, 83—False chinch-bug, 83—Insidious flower-bug, 84—Ash-gray leaf-bug, 84—Flea-like negro-bug, 84—Bibliographical list, 84.

THE CODLING-MOTH, *Carpocapsa pomonella*. By L. O. Howard...... 88

Introductory, 88—Remarks on the bibliography, 88—Geographical distribution, 89—Date of introduction into America, 89—The insect popularly described, 89—Larva, 89—Cocoon, 89—Moth, 90—Habits and natural history, 90—Broods, 90—Its round of life, 90—Irregularity of development, 91—Number of larvæ in a single apple, 91—Larvæ of the second generation, 91—Hibernation in the larval state, 92—Apparent exception to this rule, 92—Cocoons found in apple barrels, 92—Habits of the insect in the North of Germany, 92—Food-plants, 92—Stone fruits of the Rosaceæ less infested, 92—European records of its occurrence in walnuts and oak-galls, 92—A closely allied species known to feed upon walnuts, 94—Natural enemies, 94—Birds, 94—A hair-worm parasite, 94—True hymenopterous parasites, 94—Predaceous insects which feed upon the larvæ and pupæ, 95—Remedies, 95—The destruction of windfalls—feeding and trampling—the use of sheep and hogs, 96—Jarring or picking infested fruit from the trees, 96—Killing the moth, 97—Miss Walton's observations, 97—Mr. De Long's observations, 97—Capture of the moth with baits, 98—Insect-catching flowers, 98—Summary of the question of attracting the moth, 98—Quotations from Professor Riley's Fourth Missouri Report, 99—Attraction of moth impractical, 99—Trapping the worm—bandages, shingle traps, etc., 100—"Trimble hay-

2418. RILEY, C. V.—Continued.

THE CODLING-MOTH—Continued.

band system," 100—Professor Riley's rules concerning this system, 100—The Wier shingle trap, 101—Cloth bands, 101—Dr. Chapin's work in California in 1882, 102—Spraying the trees with arsenical mixtures, 103—Professor Cook's statements, 103—Professor Forbes' conclusions from his experiments in 1885, 104—Mr. Goff's experiments at Geneva, N. Y., during 1885, 106—Supplementary conclusions by Professor Forbes, 106—Mr. Alwood's experiments in Ohio the past season, 109—Results, 110—Mr. Cushman's letter, 111—The consideration of these poisons in California, 111—Time of day for spraying, 112—Notice of Mr. Dixon's paper, 113—Apparatus for applying the arsenical mixtures, 114.

SILK-CULTURE—REPORT OF THE YEAR'S OPERATIONS. By Philip Walker 115

Distribution of silk-worm eggs, 115—European egg-producers, 115—The establishment of Signor Susani, of Milan, 115—Deydier establishment at Aubenas, France, 117—Mulberry trees, 117—The Cattaneo nurseries, 117—Experimental stations, 118—The Royal Sericultural Experimental Station at Padua, 118—Experimental silk filature at Washington, 119—Production and purchase of cocoons, 120—Co-operating organizations, 122.

REPORTS OF AGENTS.. 123

REPORT ON THE GAS TREATMENT FOR SCALE-INSECTS. By D. W. Coquillett.. 123

Letter of transmittal, 123—The gas treatment for scale-insects, 123—Extract from Mr. Craw's paper, 124—Results of Dr. Dimmock's experiments on various insects with pure gases, 125—The tent, 126—Apparatus for operating the tent, 126—The McMullen tent, 126—The Wolfskill fumigator, 127—The Titus fumigator, 128—The Culver fumigator, 129—The gas, 129—The dry cyanide process, 129—The dry gas process, 130—The cyanide and soda process, 131—Remarks, 132—Agitating the air in the tent, 133—Experiments, 134—Index to experiments, 142.

REPORT ON EXPERIMENTS AGAINST SCALE-INSECTS. By Albert Koebele 143

Letter of submittal, 143—The value of arsenic as an addition to the kerosene emulsion, 143—Results of various experiments with resin compound, 143—Experiments with resin compound, 146—Experiments on *Aphididæ* with resin compound, 146.

REPORT ON THE SEASON'S OBSERVATIONS IN INDIANA, AND ESPECIALLY UPON CORN INSECTS. By F. M. Webster................ 147

Letter of transmittal, 147—The twelve-spotted Diabrotica, 148—The corn plant-louse, 148—Corn bill-bug, 149—*Myochrous denticollis*, 150—Flea-beetles, 150—The greasy cut-worm, 150—Ants, 150—*Drasterius dorsalis* (?), 151—Chinch bug, 151—*Corticaria pumila*, 151—*Calathus gregarius* (Say) versus the Colorado potato-beetle, 151—A new enemy to the bean and cow-pea, 152—The strawberry saw-fly, 152—Wheat wire-worm, 153.

REPORT UPON THE INSECTS OF THE SEASON IN IOWA. By Herbert Osborn.. 154

Letter of transmittal, 154—The turf web-worm or sod-worm, 154—Extracts from crop report, 155—Habits and life-history, 156—Description of different stages, 158—Remedies, 159—Natural enemies, 160—Other mention of the species and related forms, 160—The wheat-head army-worm, 160—Extracts from Iowa crop report, 160—Blister beetles, 161—The false chinch-bug, 162—Notes on miscellaneous insects, 162.

2418. RILEY, C. V.—Continued.

REPORT ON THE SEASON'S OBSERVATIONS IN NEBRASKA. By Lawrence Bruner.. 164

Letter of submittal, 164—Introduction, 164—Colorado potato-beetle, 164—Chinch-bug, 165—Causes of increase, 165—Locusts, 167—Cabbage insects, 168—The codling-moth, 168—Forest-tree insects, 168—The American Cimbex, 169—Other insects, 170.

REPORT ON EXPERIMENTS IN APICULTURE. By N. W. McLain....... 170

Letter of submittal, 170—Diseases of bees, 171—*Bacillus alvei* (Cheshire), 174—Quotations from Professor Cheshire, 172—Treatment, 174—Starved brood, 174—Symptoms, 175—Remedy, 175—The control of reproduction, 175.

U. S. DEPARTMENT OF AGRICULTURE.
DIVISION OF ENTOMOLOGY.

BIBLIOGRAPHY

OF

THE MORE IMPORTANT CONTRIBUTIONS

TO

AMERICAN ECONOMIC ENTOMOLOGY.

PREPARED, BY AUTHORITY OF THE SECRETARY OF AGRICULTURE,
BY
SAMUEL HENSHAW.

INDEX

TO

Parts I, II, and III.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1890.

INDICES TO PARTS I, II, AND III.

SYSTEMATIC INDEX OF THE NEW NAMES PROPOSED BY B. D. WALSH AND BY WALSH AND RILEY.

[The Walsh and Riley names are followed by W. & R. The first number following the name refers to the number of the paper in the list, the second to the page where the species is first described. As is well known, the Walsh collection was destroyed in the Chicago fire in October, 1871. A few of the types sent to Drs. Hagen and Riley are in the collections of the Museum of Comparative Zoology at Cambridge and the National Museum at Washington. Those at Cambridge are indicated by a *, those at Washington by **.]

ARACHNIDA.

ACARINA.
Acaridæ.
Acarus pruni-crumena, 373; 43.
s.-ænigma (Cecidomyia), 46; 608.
s.-semen (Cecidomyia), 46; 606.

MYRIAPODA.

CHILOGNATHA.
Iulidæ.
Cambala multistriatus (Iulus), 193; 34 = annulata, Say.

HEXAPODA.

PSEUDONEUROPTERA.
Psocidæ.
Psocus amabilis, 24; 362.*
bifasciatus, 39; 183.*
confluens, 39; 185.
conterminus, 39; 185.*
geologus, 24; 362.*[1]
lichenatus, 39; 183.*
madescens, 39; 186.*
permadidus, 39; 185.*
perplexus, 24; 361.*
pollutus, 24; 361.*
purus, 24; 361.*
rufus, 39; 185.
semistriatus, 24; 361.*
Perlidæ.
Acroneura rupinsulensis, 24; 363.*
Chloroperla brunnipennis, 24; 367.*
fumipennis (Perla), 24; 366.*
nana, 24; 367.*
Perlidæ—Continued.
Perla decipiens, 24; 364.*
elongata, 24; 366.*[1]
flavescens, 24; 363.*[1]
producta, 24; 365.*
varians, 24; 364.*
Ephemeridæ.
Bætis sicca, 24; 371.*[1]
Bætisca, 24; 378.
Cloe dubia, 24; 380.*[1]
ferruginea, 24; 379.*
fluctuans, 24; 379.*
mendax, 24; 381.*
Ephemera flaveola, 24; 377.*
myops, 39; 207.*
Ephemerella, 24; 377.
consimilis, 24; 378.
excrucians, 24; 377.*[1]
Heptagenia, 39; 197.
cruentata, 39; 205.*
maculipennis, 39; 206.
simplex, 39; 204.*
Hexagenia, 39; 197.
Palingenia flavescens, 24; 373.*[1]
pulchella, 24; 375.*[1]
terminata, 24; 376.*[1]
vittigera, 24; 373.*
Pentagenia, 39; 196.
quadripunctata, 39; 198.
Potamanthus? odonatus, 24; 372.
Siphlurus interlineata (Bætis), 39; 190 = femorata, Say.
Odonata.
Agrion binotatum, 24; 387.*
dentiferum, 39; 236.*
hageni, 24; 386. 39; 234.*[1]

---

[1] Also in the National Museum.

Odonata—Continued.

- Cordulia ? molesta, 39; 254.
- Gomphus amnicola, 24; 396.*[1]
  - consobrinus, 39; 242.*
  - fluvialis, 24; 394.*[1]
  - grasilinellus, 24; 394.*[1]
  - quadricolor, 39; 246.
  - vastus, 24; 391.*[1]
  - ventricosus, 39; 249.
- Herpetogomphus ? rupinsulensis, 24; 388.
- Hetærina pseudamericana, 39; 223.*
  - rupamnensis, 39; 230.*[1]
  - rupinsulensis, 24; 383.
  - scelerata, 39; 267.
  - texana, 39; 227.
- Lestes inæqualis, 24; 385.
- Macrogomphus ? spiniceps, 24; 389.
- Macromia flavipennis, 24; 398.
  - illinoiensis, 24; 397.
- Ophiogomphus mainensis, 39; 255.

ORTHOPTERA.

Phasmidæ.

- Diapheromera velii, 45; 410.*

HEMIPTERA.

Coccidæ.

- Chionaspis harrisii (Aspidiotus), 2; 308** = furfurus, Fitch.
  - salicis-nigræ (Aspidiotus), 373; 40 = salicis, Linn.
- Pulvinaria acericola (Lecanium) W. & R., 389; 14** = innumerabilis, Rath.
  - macluræ (Lecanium) W. & R., 389; 14 = innumerabilis, Rath.

Aphididæ.

- Aphis bella, 27; 299.*
  - carduella, 27; 300.
  - quercifoliæ, 27; 298.
- Byrsocrypta pseudobyrsa, 27; 306.
  - vagabunda, 27; 306.*[1]
- Calaphis, 27; 301.
  - betulella, 27; 301.*
- Pemphigus formicarius, 27; 308.
  - formicetorum, 27; 308.*
  - ulmi-fusus W. & R., 518; 109.*
- Phylloxera caryæ-globuli, 27; 309.**
  - caryæ-semen (Dactylosphæra) 373; 23.*
- Schizoneura cornicola (Eriosoma ?), 27; 304.
  - fungicola (Eriosoma ?), 27; 304.

Jassidæ.

- Chloroneura, 22; 4[2] = Empoasca, Walsh.
- Empoa albicans, 22; 4.
- Empoasca, 22; 3.
  - abnormis (Chloroneura), 22; 4.
  - consobrina, 22; 4.
  - malefica (Chloroneura), 22; 4 = viridescens, Walsh.
  - maligna (Chloroneura), 22; 4 = obtusa, Walsh.
  - obtusa, 22; 4.
  - viridescens, 22; 3.
- Erythroneura australis, 22; 4.
  - octonotata, 22; 4.
  - ziczac, 22; 4.

Jassidæ—Continued.

- Typhlocyba aurea, 22; 3.
  - binotata, 22; 3.
  - pallidula, 22; 3.

Tingitidæ.

- Gargaphia amorphæ (Tingis), 45; 409.**
  - tiliæ (Tingis), 45; 408.**

COLEOPTERA.

Scolytidæ.

- Scolytus fagi, 220; 58.

Calandridæ.

- Sphenophorus zeæ, 337; 117** = sculptilis Uhler.

Curculionidæ.

- Anthonomus cratægi, 197; 266.
  - syncophanta, 197; 265.
  - tessellata, 197; 267.
- Apion languinosum, 197; 269 = walshii, Smith.
- Coccotorus prunicida (Anthonomus), 33; 372 = scutellaris, Lec.
- Conotrachelus cratægi, 35; 37.
  - puncticollis, 34; 21.

Chrysomelidæ.

- Fidia viticida, 272; 87.**
- Physonota 5-punctata (Cassida) W. & R. 767; 4** = unipunctata, Say.

DIPTERA.

Trypetidæ.

- Trypeta pomonella, 373; 33.**

Anthomyidæ.

- Homalomyia leidyi, 382; 138.
  - prunivora, 382; 138.
  - wilsoni, 382; 138.

Tachinidæ.

- Nemoræa militaris (Senometopia) 6; 367** = leucaniæ Kirkp.

Syrphidæ.

- Pipiza radicum W. & R., 495; 83** = ? femoralis Loew.

Midaidæ.

- Midas fulvipes, 46; 306.

Cecidomyidæ.

- Cecidomyia albovittata, 40; 621.*
  - cornuta, 46; 625.
  - cratægi-bedeguar, 376; 79.
  - orbitalis, 46; 623.
  - q-pilulæ (Cynips), 41; 481.
  - s.-batatas, 46; 601.**[1]
  - s.-brassicoides, 46; 577.**[1]
  - s.-cornu, 46; 570. 197; 224.
  - s.-coryloides, 46; 588.*
  - s.-gnaphaliodes, 46; 583.*
  - s.-hordeoides, 46; 599.
  - s.-nodulus, 46; 599.*
  - s.-rhodoides, 46; 586.*
  - s.-siliqua, 46; 591.*[1]
  - s.-strobiliscus, 46; 582. 197; 223.
  - s.-strobiloides, 46; 580.
  - s.-triticoides, 46; 598.*[1]
  - s.-verruca, 46; 606.
  - v.-coryloides W. & R., 518; 107.**
  - v.-pomum W. & R., 518; 106.**
- Diplosis annulipes, 46; 629.
  - atricornis, 46; 628.

---

[1] Also in the National Museum.

[2] The pages refer to the separate.

Midaidæ—Continued.
atrocularis, 46; 626.
decem-maculata, 46; 631.
helianthi-bulla, 197; 228.
septem-maculata, 46; 631.

LEPIDOPTERA.

Tortricidæ.
Grapholitha prunivora (Semasia), 373; 80.**
Phoxopteris fragariæ (Anchylopera), W. & R., 499; 90.**

Pyralidæ.
Acrobasis nebulo (Phycita), 2; 308 = indiginella, Zeller.

Geometridæ.
Aplodes venustus (Hipparchiscus), 40; 31** = mimosaria, Guen.
Hipparchiscus, 40; 300 = Aplodes, Guen.

Bombycidæ.
Halesidota antiphola, 40; 288 = tessellata, S. & A.
harrisii, 45; 430** = tessellata, S. & A.
Limacodes? tetradactylus, 40; 300.
Phobetron hyalinum (Limacodes?), 40; 300.**
Sphingicampa, 40; 290.
distigma, 40; 290 = bicolor, Harris.

Ægeriadæ.
Ægeria hospes (Trochilium), 197; 270.

HYMENOPTERA.

Tenthredinidæ.
Euura perturbans, 197; 254.
s.-gemma; 197; 250 = orbitalis, Nort.
s.-nodus, 197; 253.**
s.-ovum, 197; 251.
Nematus fur, 197; 263.
hospes, 197; 261.
inquilinus, 197; 260.
mendicus, 197; 261.
s.-desmodioides, 197; 257.**
s.-pisum, 197; 258.**
s.-pomum, 197; 255.**
Pristiphora grossulariæ, 140; 123.**
sycophanta, 197; 263.

Cynipidæ.
Acraspis q.-erinacei (Cynips), 41; 483.
Amphibolips prunus (Cynips) W. & R., 518; 104.**
Ancistrophus, 821; 74.
L.-pisum, 821; 74.**
Andricus q.-flocci (Cynips), 41; 482.**
q.-podagræ (Cynips), 41; 491.*[1]
Biorhiza q.-forticornis (Cynips), 41; 490.*
Ceroptres ensiger (Amblynotus), 41; 496* = petiolicola, O. S.
inermis (Amblynotus), 41; 498.
Holcaspis mamma (Cynips), 518; 102.**
Synergus albipes (Synophrus), 41; 496* = lana, Fitch.
mendax, 41; 498.
rhoditiformis, 41; 499* = lignicola, O. S.
Tribalia, 41; 470.
batatorum, 41; 471.

Ichneumonidæ.
Acænitus rupinsulensis, 385; 144.
Bassus bicapillaris, 385; 88.
ruficrus, 385; 86.
semifasciatus, 385; 86.
tripicticrus, 385; 85.
Catocentrus, 385; 98.
Chorinæus cariniger (Polyrhabdus), 385; 98.
Cryptocentrus, 385; 156 = Mesoleius, Holmg.
Cryptus albicaligatus; 385; 82.
albisoleatus, 385; 80.
atricollaris, 385; 72.**
cinctipes, 385; 74.
nigricalceatus, 385; 77.
picticoxus, 385; 82.
rhomboidalis, 385; 74.
rufifrons, 385; 75.
Cteniscus albilineatus, 385; 107.
ornatus (Exenteron), 385; 105.
Echthrus annulicornis, 385; 159.
Ephialtes gigas 385; 110.
pusio, 385; 111.
pygmæus, 385; 111.**
Exetastes illinoiensis (Leptobatus), 385; 148.
suaveolens, 385; 146.
Exochiscus, 385; 96 = Orthocentrus, Grav.
Exochus albiceps, 385; 96.
annulicrus, 385; 95.
atriceps, 385; 95.
Glypta alboscutellaris, 385; 127.
diversipes, 385; 125.
ruficornis, 385; 129.
rufipleuralis, 385; 127.
Hemiletes fuscatus, 380; 12 = var. of nemativorus, Walsh.
nemativorus, 380; 11.
Joppidium, 385; 67.
ruficeps, 385; 70.
Lampronota amphimilæna, 385; 117.
breviventris, 385; 120.
imitatrix, 385; 121.
interpellata, 385; 118.
pictiventris, 385; 119.
Mesochorus vitreus, 6; 368.**
Orthocentrus pusillus (Exochiscus), 385; 97.
stigmaticus, 385; 101.
trifasciatus, 385; 100.
Pararhyssa, 385; 109 = Rhyssa Grav.
Pezomachus minimus, 6; 368.**
Pimpla cœlebs, 385; 141.
investigatrix, 385; 142.
pictipes, 385; 135.
vidua, 385; 140.
Polyrhabdus, 385; 98 = Chorinæus Holmgr.
Polysphincta nigriceps, 385; 144.
nigrita, 385; 144.
pimploides, 385; 144.
Tryphon atricoxus, 385; 104.

Braconidæ.
Apanteles militaris, 6; 369.**

Chalcididæ.
Antigaster, 384; 368 = Eupelmus, Dalm.
Decatoma dubia, 384; 300 = var. of varians, Walsh.

---

[1] Also in the National Museum.

Chalcididæ—Continued.
- excrucians, 384; 300 = var. of nigriceps. Walsh.
- hyalipennis, 384; 300.
- nigriceps, 384; 300.
- nubilistigma, 384; 300.
- simplicistigma, 384; 300.**
- varians, 384; 300.**
- Eupelmus mirabilis (Antigaster), 384; 369.**
- Eurytoma abnormicornis, 384; 299.
  - auriceps, 384; 299.**
  - bicolor, 384; 298.
  - diastrophi, 384; 299.
  - gigantea, 384; 300.
  - globulicola, 384; 299 = var of prunicola, Walsh.
  - prunicola, 384; 298.**
  - punctiventris, 384; 299.
  - seminatrix, 384; 299 = var. of auriceps, Walsh.
- Glyphe viridascens, 6; 370.**
- Haltichella perpulchra (Hockeria), 11; 258.
- Hockeria, 11; 258 = Haltichella, Spin.
- Semiotellus chalcidephagus, 384; 368.**
- Smicra albifrons (Chalcis), 6; 369.**

Formicidæ.
- Formica aphidicola, 27; 310.
- Lasius latipes (Formica), 27; 311.

Pompilidæ.
- Agenia subcorticalis, 375; 162.
- Ceropales rufiventris, 375; 163.

Sphecidæ.
- Ammophila pictipennis, 375; 164.**

Bembecidæ.
- Megastizus brevipennis (Stizus), 375; 162.**

SYSTEMATIC INDEX OF THE NEW NAMES PROPOSED BY C. V. RILEY.

[The types, without exception, are preserved in the collection of the National Museum, Washington, D. C.]

ARACHNIDA

ACARINA.
Trombidiidæ.
Tetranychus ? americanus (Leptus), 1326; 17.
? irritans (Leptus), 1326; 18.
Trombidium giganteum, 1632; 143.
locustarum, 1632; 142.
muscarum, 1632; 144.
Hydrachnidæ.
Hydrachna belostomæ, 1632; 146.
Gamasidæ.
Uropoda americana, 1626; 275.
Ixodidæ.
Ixodes bovis 1309*a*; 118.
Oribatidæ.
Hoplophora arctata, 1363; 216.
Tyroglyphidæ.
Tyroglyphus phylloxeræ, 1363; 215.
Acaridæ.
Acarus aceris-crumena, 1265; 339.

HEXAPODA.

ORTHOPTERA.
Acridiidæ.
Caloptenus atlanis, 1423; 169.
Dendrotettix, 2410; 86.
quercus, 2410; 86.
Gryllidæ.
Œcanthus latipennis, 2026; 61.
HEMIPTERA.
Coccidæ.
Kermes galliformis, 1972; 482.
Mytilaspis pomicorticis, 1329; 96. = pomorum, Bouché.
Aphididæ.
Lachnus platanicola, 2138; 198.
Pemphigus acerifolii, 1678; 16.
fraxinifolii, 1678; 17.
populi-monilis, 1678; 13.
populi-ramulorum, 1678; 16.
populi-transversus, 1678; 15.
Phylloxera caryæ-avellana, 1901; 230.
caryæ-fallax, 1423; 118.
caryæ-gummosa, 1423; 118.
caryæ-ren, 1423; 118.
caryæ-scissa, 1901; 230.
Schizoneura americana, 1678; 4.
ulmi (Eriosoma), 1059; 124.
Psyllidæ.
Blastophysa, 2272; 75.
celtidis-gemma, 2272; 74.
Calophya nigripennis, 2272; 69.
Ceropsylla, 2272; 76.
sideroxyli, 2272; 76.
Pachypsylla, 2208; 157: 2272; 71.
celtidis-mamma, 2208; 157. 2272; 73.
Rhinopsylla, 2272; 78.
schwarzii, 2272; 78.
Jassidæ.
Diedrocephala flaviceps, 1767; 78.
Lygæidæ.
Nysius destructor, 1329; 113. = angustatus, Uhler.
COLEOPTERA.
Scolytidæ.
Scolytus caryæ, 938; 69. = 4-spinosus, Say.
Curculionidæ.
Ampeloglypter vitis (Madarus), 1059; 132. = sesostris, Lec.
Podapion, 2231; 62.
gallicola, 2231; 62.
Tyloderma fragariæ (Analcis), 1301; 44.
Meloidæ.
Hornia, 1601.
minutipennis, 1601.
Bruchidæ.
Bruchus fabæ, 1301; 55.
DIPTERA.
Oscinidæ.
Oscinis brassicæ, 2291; 322.
Anthomyidæ.
Anthomyia *var.* calopteni, 1557. = angustifrons, Meig.
zeas, 1059; 155.
Sarcophagidæ.
Sarcophaga sarraceniæ, 1390; 238.
Tachinidæ.
Exorista cecropiæ, 1112; 101.
doryphoræ (Lydella), 1059; 111.
flavicauda, 1127; 51.
Masicera archippivora, 1301; 150.
Tachina aletiæ, 1712; 162.
anonyma, 1311; 129.

Asilidæ.
Proctacanthus missouriensis (Asilus), 1127; 122 = milberti, Macq.
Simulidæ.
Simulium meridionale, 2394; 513.
pecuarum, 2394; 512.
piscicidium, 1174; 228.
Mycetophilidæ.
Mycetophila persica, 963; 397.
Cecidomyidæ.
Cecidomyia cupressi-ananassa, 1180; 244.
Diplosis pyrivora, 2392.
LEPIDOPTERA.
Pterophoridæ.
Platyptilus carduidactylus (Pterophorus), 1059; 180.
Tineidæ.
Blastobasis iceryæella, 2394; 485.
Coleophora malivorella, 1721; 254.
Gelechia gallæsolidaginis, 1059; 175.
Holocera glandulella, 1310; 18.
Prodoxus, 1830; 155.
ænescens, 2000; 636.
cinereus, 2000; 636.
decipiens, 1830; 155.
intermedius, 2000; 635.
marginatus, 2000; 635.
Pronuba, 1329; 150: 1336; 55.
maculata, 2000; 633.
yuccasella, 1329; 151: 1336; 56.
Tortricidæ.
Conchylis erigeronana, 1968; 316.
œnotherana, 1968; 316.
Eccopsis ferrugineana (Exartema), 1968; 317.
monetiferana (Exartema), 1968; 317.
Grapholitha gallæ-saliciana, 1968; 320.
ninana, 2176; 661.
olivaceana, 1968; 320.
Mellisopus, 1969; 322.
aurichalceana 1969; 323.
Pædisca celtisana, 1968; 319.
giganteana, 1968; 318.
Penthina fullerea.* = hebesana, Walk.
Phoxopteris cornifoliana, 1968; 324.
murtfeldtiana, 1968; 323.
Proteoteras, 1968; 321.
æsculana, 1968; 321.
Semasia helianthana, 1968; 319.
Steganoptycha claypoleana (Sericoris), 2114; 914.
Teras cinderella (Tortrix), 1311; 47.
Pyralidæ.
Acrobasis nebulella (Phycita), 1311; 42. = var. of indiginella Zeller.
vaccinii, 2291.
Chilo oryzællus, 2119; 133.
Clydonopteron, 1929; 287.
tecomæ, 1929; 288.
Pempelia hammondi, 1311; 46.
Geometridæ.
Paleacrita, 1438; 278.
Synchlora rubivora (Aplodes), 1059; 140.
Noctuidæ.
Acronycta betulæ, 2280; 2.
populi, 1127; 120.
Agrotis cochranii, 964; 414.
morrisoniana, 1409; 286.
scandens, 1059; 78.
Anomis texana, 2343; 350.
Exyra ridingsii (Xanthoptera), 1411; 240.
Laphygma autumnalis (Prodenia), 1301; 116.
fulvosa (Prodenia), 1301; 117.
obscura (Prodenia), 1301; 117.
Lithophane cinerea (Xylina), 1301; 135.
Plusia brassicæ, 1127; 111.
Pyrophila conspersa (Amphipyra), 1301; 74.
Bombycidæ.
Cerura multiscripta, 1411; 241.
Nola sorghiella, 2119; 187.
Ægeriadæ.
Bembecia rubi (Ægeria), 1363; 113. = marginata, Harris.
HYMENOPTERA.
Cynipidæ.
Cynips q.-glandulus, 1606; 578.
q.-mellaria, 1942; 298.
Didactyum, 1749; 52 = Hexaplasta, Forst.
Hexaplasta zigzag (Didictyum), 1749; 52.
Ichneumonidæ.
Hemiteles cressonii, 1059; 177.
thyridopterygis, 1059; 150.
Ichneumon obsoletus, 1570; 55. = var. of brevipennis, Cress.
Limneria lophyri, 1570; 32.
Thersilochus conotracheli (Porizon), 1301; 28.
Braconidæ.
Apanteles acronyctæ, 1960; 312.
aletiæ, 1960; 306.
cacœcia, 1960; 305.
cassianus, 1960; 307.
flaviconchæ, 1960; 308.
hemileucæ, 1960; 309.
hyphantriæ, 2394; 533.
limenitidis (Microgaster), 1301; 158.
megathymi, 1960; 304.
paleacritæ, 1960; 313.
pieridivora, 2097; 679. = var. of congregatus, Say.
politus, 1960; 307.
rufocoxalis, 1960; 310.
scitulus, 1960; 310.
smerinthi, 1960; 311.
theclæ, 1960; 308.
Bracon charus, 1423; 75.
Exothecus prodoxi, 1831; 156.
Meteorus hyphantriæ, 2394; 532.
Microgaster gelechiæ, 1059; 178.
Microplitis ceratominæ, 1960; 303.
gortynæ, 1960; 304.
Perilitus indagator, 1311; 43.
Sigalphus rufus, 1301; 27. = var. of curculionis, Fitch.
Spathius trifasciatus, 1329; 106.

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*Described and figured in A. S. Fuller's "Injurious insects." <Tilton's Journ. of Hortic. and Florist's Companion, October, 1868, v. 4, pp. 207-209.

Chalcididæ.
Cirrospilus flavicinctus.[1]
Eurytoma bolteri, 1059; 177. = var. of diastrophi, Walsh.
Isosoma grande, 2288; 111. 2291; 358.
tritici, 2060; 247.
Merisus subapterus, 2332; 416.
Pentarthron[2] = Trichogramma.
Pleurotropis phyllotretæ, 2291; 308.
Spilochalcis mariæ (Chalcis), 1112; 101.
Stictonotus isosomatis, 2119; 186.

Chalcididæ—Continued.
Tetrastichus esurus (Cirrospilus), 1712; 162.
productus, 2332; 419.
Trichogramma minutum, 1301; 158. 2026; 68.
pretiosa, 1712; 161.

Proctotrupidæ.
Caloptenobia, 1643; 306 = Scelio, Latr.
Scelio ovivora (Caloptenobia), 1643; 306 = famelicus, Say.
Telenomus bifidus, 2378; 48. 2394; 531.

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[1] Described and figured in Lintner's First Report N. Y. State Entomologist, p. 159.

[2] Proposed (Record of Amer. Ent., 1871, p. 8) for Trichogramma minutum. Pentarthron has, however, been used for a genus of beetles.

INDEX.

Abbot Sphinx, 1127.
  larva, 1248, 1277.
  Parasites on its larva, 1277.
Abia caprifolia, 2360.
Abnormal cocoon, 1797.
Abroad. Colorado potato-beetle, 1364.
Abutilon. Aletia feeding on, 2343.
Acacia filiaria. Galls on, 2176.
ACACIA. INSECTS AFFECTING.
  Dorthesia characias, 1730.
  Grapholitha ninana, 2176.
  Lytta cinerea = Macrobasis unicolor.
  Macrobasis unicolor, 1290.
Acacias. Large white scale on, 1730.
Academy of Science. Address of president St. Louis, 1564, 1629.
Acænitus rupinsulensis *n. sp.*, 385.
Acanthia lectularia, 497, 1502, 1741.
Acaridous gall on Cratægus, 376.
Acarina, 412, 1444, 1639, 1710, 1739, 1992.
Acarus aceris-crumena *n. sp.*, 1265.
  pruni-crumena *n. sp.*, 373.
  salicis-ænigma, 46.
  salicis-semen, 46.
  scabiei, 497.
Accusation. Unjust, 1537.
Acer dasycarpum. Scale on, 1575.
  sp. Supposed tineid larva on leaf of fossil, 2084.
Achatodes zeæ, 311.
Achemon Sphinx, 1127.
Acheta abbreviatus = Gryllus abbreviatus.
Achetidæ = Gryllidæ.
Achorutes nivicola, 608.
Acoloithus falsarius, 124.
Acorn cups. New oak gall on, 1606.
  gall, 1944.
  moth, 1310, 1311.
Acraspis q.-erinacei, 41.
Acrididæ, 391, 431, 433, 929, 1446, 1452, 1548, 1645, 1947, 1959, 2002, 2118, 2267, 2311, 2331, 2363.
  Dimorphism in, 1889.
  Effects of winter on the eggs of, 1550.
  Egg parasites of, 2355.
Acridium americanum, 1413, 1549, 1570.
  eaten out by ants, 1413.
  obscurum, 2119.
  perigrinum, 1959.
Acrobasis consociella, 1311.
  hammondi = Pempelia hammondi.
  indiginella, 2, 341, 373, 511, 574, 810, 949, 975, 998, 1012, 1069, 1151, 1232, 1311, 1580, 1962.
  juglandis, 1311.
  nebulella *n. v.*, 1311 = A. indiginella.
  nebulo = A. indiginella.
  vaccinii *n. sp.*, 2291, 2349.
Acroneura rufinsulensis *n. sp.*, 24.
Acronycta acericola = A. americana.
  americana, 571, 841.
  betulæ *n. sp.*, 2280.
  lepusculina, 1127.
  oblinita, 1208, 1276, 1301.
  populi *n. sp.*, 1127.
  xylinoides, 1329.
Acrosoma spinea, 813.
  stellata, 1869.
Acrydii, 1959, 2267.
Actias luna, 776, 1311.
  selene, 1311.
Ad interim committees, 394.
Adalia bipunctata, 2452.
Address at Atlanta Cotton Convention, 2038.
  on entomology, 1454.
  St. Louis Academy Science. President's, 1564, 1629.
  Washington Entomological Society. President's, 2355.
Adelops, 2033.
Adimonia rufosanguinea, 156.
Æcidium berberidis, 1605.
Ægeria acerni, 743, 1063, 1360, 1363.
  albicornis, 2410.
  caudatum = Alcathœ caudatum.
  exitiosa = Sannina exitiosa.
  hospes, 197.
  impropria, 2385, 2410.
  polistiformis = Sciapteron polistiformis.
  pyri, 2410.
  rubi *n. sp.*, 1363 = Bembecia marginata.
  sp., 302.
  syringæ = Podosesia syringæ.
  tipuliformis, 55, 340, 481, 974, 1642, 2238.
Ægeriidæ, 302, 576, 2341.
  life habits, 2410.
Ægerian maple borer. A new, 1360.
Ægiale cofaqui = Megathymus yuccæ.

Æschna constricta, 759.
Agassiz, L. Criticism of entomological statements, 44.
Agave. New use of American, 1498.
Agenia architecta, 375.
bombycina, 375, 543.
cupida, 375.
subcorticalis *n. sp.*, 375.
Agnomia anilis, 785.
Agonoderus comma = A. pallipes.
pallipes, 3, 1825, 2317.
Agraulis vanillæ, 2410.
Agricultural advancement in the United States, 1750.
editorial excursion, 1349.
Agriculture and its advancement. Entomology and its relation to, 1329.
American writers on insects in relation to, 2238.
Entomological work at the Department of, 1892.
Insects in relation to, 2238.
Legislation in regard to insects injurious to, 1468.
New insects injurious to, 2055.
Agrilus ruficollis, 821, 1124, 1771.
Agrion binotatum *n. sp.*, 24.
dentiferarum *n. sp.*, 39.
hageni *n. sp.*, 39.
Agrotidæ, 3, 868, 901, 964, 1504, 1522, 2310.
Agrotis, 2238.
annexa, 2291.
clandestina, 901, 2291.
cochranii *n. sp.*, 964 = A. messoria, Harris.
Description of a new species of, 1409.
devastatrix = Hadena devastatrix.
fennica, 2355.
herilis, 964, 1059.
inermis = A. saucia.
lycarum, 2156.
malefida, 2291, 2322.
messoria, 901, 964, 1059, 1873, 2156, 2291, 2331, 2363.
Harr. *vs.* Agrotis scandens Riley, 2156.
morrisoniana *n. sp.*, 1409.
repentis = A. cochranii.
saucia, 607, 1059, 1095, 1775, 1826, 1941, 2291.
scandens *n. sp.*, 1059, 1408, 2156.
Riley *vs.* Agrotis messoria Harr., 2156.
sp., 281.
subgothica, 964, 1059.
telifera = A. ypsilon.
tricosa, 964, 2324.
ypsilon, 626, 658, 964, 1059, 1504, 2291.
AILANTHUS. INSECTS AFFECTING, 1343.
Attacus cynthia, 899, 1179, 1343, 1460, 1718.
Œta compta = Œ. punctella.
punctella, 1059, 1343.
Samia cythia = Attacus cynthia.
Ailanthus silk-worm, 899, 1311, 1718.
in Missouri, 1460.
naturalized, 1179.
Air-holes not needed in sending insects, 655.
Alabama. May beetles swarming in, 1812.
Moths caught in, 1774.
Spread of Pieris rapæ into, 1720.
Alaria florida = Rhodophora florida.
Alcathœ caudatum, 481.
Alcohol. Bugs in, 605.
Aleochara anthomyia = A. nitida.
nitida, 2353.
Aleocharini, 1729.
Aletia argillacea = A. xylina.
Aletia xylina *vs.*, 2339.
Migrations and hibernation of, 1689.
chrysalides. Not, 1826.
Chrysalides supposed to be those of, 1775.
Moths mistaken for, 1976.
xylina, 328, 636, 1127, 1338, 1353, 1363, 1369, 1649, 1657, 1689, 1702, 1712, 1719, 1721, 1722, 1728, 1736, 1749, 1758, 1769, 1814, 1826, 1831, 1845, 1852, 1882, 1888, 1903, 1914, 1932, 1953, 1976, 1997, 2038, 2064, 2069, 2102, 2119, 2130, 2141, 2155, 2164, 2295, 2343.
Aletia xylina. (See also Cotton-worm.)
Anatomy, 2343.
Annual generations, 1736.
Bibliography, 2343.
Bulletin No. 3, U.S. Ent. Com., 1763.
Characters, 1736, 2343.
Classification, 2343.
Destruction of the moth, 1763.
Destructiveness, 1763, 2343.
Devices for the destruction of, 2343.
Flight (powers of), 1763.
Habits, 2343.
Hibernation, 1763.
History of literature of, 2343.
Insects liable to be mistaken for, 2343.
Invertebrate enemies, 1763.
Machinery for the destruction of, 2343.
Mechanical means of killing, 1763.
Meteorological influence upon, 2343.
Migrations, 1763.
Natural enemies, 1763, 2343.
Natural history, 2343.
Nomenclature, 2343.
in other countries, 2343.
Past history in the United States, 2343.
Poisoning the worm, 1763.
Preventive measures, 1763, 2343.
Remedies, 1763, 2343.
Stages, 1763.
Terrestrial influences, 2343.
in the United States. Hibernation of, 2141.
Vertebrate enemies of, 1763.
vs. Aletia argillacea, 2339.
Wet weather (effects of), 1763.
Aleurodes, 221.
on Oxalis, 1791.
Allorhina nitida, 54, 718.

- Alpine flowers. Fertilizers of, 1838.
- Alwood, W. B. Report on Ohio insects, 2382.
  - Tests with insecticides on garden insects, 2382.
- Alypia octomaculata, 343, 1059, 1127, 1130, 1208, 1363.
- Amara, 1643.
- Ambiguous Hippodamia, 2119.
- Amblycorypha oblongifolia, 569, 1060, 1157, 1329, 1363.
- Amblynotus ensiger *n. sp.*, 41 = Ceroptres petiolicola.
  - inermis *n. sp.*, 41. = Ceroptres inermis.
- Amelanchier. Lixus parvus on, 2404.
- America. Problem of the hop-plant louse in Europe and, 2400.
- American Agave. New use of, 1498.
  - A. A. S. Entomology at the 1880 meeting of, 1893.
    - Permanent subsection of entomology, 2027.
  - bean Bruchus, 1301.
  - Cimbex, 2291, 2418.
  - Entomological Society, 621.
  - Entomologist, 1309.
    - Salutatory, 386.
  - insects. Imported and native, 1115, 1127.
  - lackey moth, 1301.
  - Meromyza, 1058, 1059, 2291, 2394.
  - Procris, 1127.
  - Staphylinidæ wanted, 1786.
  - tent caterpillar. Eggs of the, 1329.
- Ames, Iowa, Osborn, H. Experiments at, 2344.
- Ammophila pictipennis *n. sp.*, 375, 543.
- Amorbia. Pine, 2363.
- Amorpha fruticosa. Walshia amorphella on, 1127, 2356.
- Ampeloglypter ater, 821.
  - sesostris, 821, 1059.
  - vitis = A. sesostris.
- Ampelophaga myron, 837, 1056, 1086, 1127, 1247, 1290, 1960.
- Ampelopsis. Swellings in roots of, 1428.
- Amphibolips aciculata = A. q.-spongifica.
  - q.-inanis, 45, 518, 1448.
  - q.-prunus, 518, 1606.
  - q.-spongifica, 41, 45, 518, 1448.
- Amphicerus, 1747.
  - bicaudatus, 2, 55, 249, 485, 517, 633, 839, 893, 1163, 1185, 1311, 1329, 1747, 1776, 1820.
- Amphipyra conspersa *n. sp.*, 1301 = Pyrophila conspersa.
  - pyramidea = Pyrophila pyramidea.
  - pyramidoides = Pyrophila pyramidoides.
    - Hibernation of, 1471.
- Amphiscepa bivittata, 2116.
- Amputating insects, 1556.
- Anabrus, 2267.
  - purpurascens, 1959.
  - simplex, 1959.
- Analcis fragariæ *n. sp.*, 1301 = Tyloderma fragariæ.
- Anametis grisea, 2117.
- Anaphora, 2536.
- Anarsia lineatella, 2235.
- Anasa tristis, 409, 825, 867, 1858, 1948.
- Anatis 15-punctata, 959, 1274, 1450, 1672.
- Anax junius, 1851, 2455.
- Anchylopera fragariæ *n. sp.*, 499 = Phoxopteris fragariæ.
- Ancistrophus *n. g.*, 821.
  - l.-pisum *n. sp.*, 821.
- Anderson, E. H. Cotton-worm in south Texas in 1883, 2253.
  - Report on cotton insects, 2343.
- Andrena, 800.
- Andricus q.-californica, 1967.
  - q.-flocci, 41.
  - q.-operatola, 1352.
  - q.-operator, 1352.
  - q.-podagræ, 41, 45.
  - q.-punctata, 45, 1822.
  - seminator, 739, 821, 1037.
- Angoumois grain-moth, 2291.
- Angular winged katydid, 1363.
  - Eggs of, 1518.
- Animal kingdom, 393.
- Aniseed and grain-weevil, 1742.
- Anisodactylus baltimorensis, 627.
  - confusus, 2042.
- Anisoplia austriaca, 1935.
- Anisopteryx, 91, 96, 274, 717, 902, 910, 1391.
  - æscularia, 1604.
    - Differences between Anisopteryx pometaria and, 1604.
  - pometaria, 1127, 1363, 1423, 1438, 1482, 1539, 1540, 1604, 2149, 2238, 2267.
  - Variation in imagos, 1540.
  - Venation of wings, 1540.
  - vernata = Paleacrita vernata.
- Anisota = Dryocampa.
  - rubicunda = Dryocampa rubicunda.
- Anomala lucicola, 113.
  - Varying, 2291.
- Anomis erosa, 2343.
  - exacta, 1651, 2343.
  - texana *n. sp.*, 2343.
  - urena, 2119.
  - xylina = Aletia xylina.
- Anonymous Tachina-fly, 1423, 1625.
- Anophthalmus, 2033.
- Ant-hill. Hemispherical larva at bottom of, 1789.
- Antheræa pernyi, 1311.
  - yama-mai, 1311.
    - as a silk-producer, 1346.
- Anthicus, 2105.
- Anthocoris insidiosus = Triphleps insidiosus.
- Anthomyia, 1643.
  - angustifrons, 1541, 1557.
  - brassicæ, 2291.
  - Cabbage, 2291.
  - calopteni *n. sp.*, 1541, 1557 = angustifrons, Meig.
  - ceparum, 225.
  - Egg parasite, 1570, 1625, 1643.
  - zeas *n. sp.*, 657, 1059, 1065.
- Anthomyidæ. North American, 1966.
- Anthonomus cratægi *n. sp.*, 197, 376, 1244.
  - musculus, 2322, 2331, 2363.

Anthonomus prunicida *n. sp.*, 33 = Coccotorus scutellaris.
quadrigibbus, 42, 254, 1088, 1173, 1176, 1228, 1301, 1358, 2232.
suturalis, 2363.
sycophanta *n. sp.*, 197, 821.
tessellata *n. sp.*, 197.
Anthophora abrupta, 372, 1601, 1651.
sponsa = A. abrupta.
Anthreni, 483.
Anthrenus musæorum, 492, 572.
scrophulariæ, 1659, 1663, 1699, 1752.
varius, 5772.
Antigaster *n. g.*, 384 = Eupelmus.
mirabilis *n. sp.*, 384 = Eupelmus mirabilis.
vs. Eupelmus, 1932, 1978.
Antiopa butterfly, 1234.
Antistrophus *n. g.*, 821, 1131.
lygodesmiæ-pisum *n. sp.*, 821.
Ants, 1278, 1736, 2418.
Acridium eaten out by, 1413.
and aphides, 520, 2300.
in Arizona. Leaf-stripping, 2532.
gardens. Destroying black, 438.
horticulture. Utilization of, 2089, 2137.
injurious in Arizona, 1987.
nests in gardens, 496.
Red, 2309.
Apanteles acronyctæ *n. sp.*, 1960.
aletiæ *n. sp.*, 1960, 2343.
cacœciæ *n. sp.*, 1960.
cassianus *n. sp.*, 1960.
congregatus, 1247.
flaviconchæ *n. v.*, 1960.
glomeratus, 2291.
hemileucæ *n. sp.*, 2378, 2394.
limenitidis *n. sp.*, 1301.
megathymi *n. sp.*, 1960.
militaris *n. sp.*, 6, 12, 1059, 1357, 1442, 1670.
paleacritæ *n. sp.*, 1960.
pieridivora *n. v.*, 2097.
politus *n. sp.*, 1960.
rufocoxalis *n. v.*, 1960.
scitulus *n. v.*, 1960.
smerinthi *n. sp.*, 1960.
theclæ *n. sp.*, 1960.
Apatura alicia, 1363, 1977.
celtis, 1356, 1363.
clyton, 1356, 1363.
herse = A. clyton.
lycaon = A. celtis.
Apnelinus mytilaspia, 1329.
Aphid. Bitten by an, 2205.
Aphidea, 952, 1736.
Ants and, 520, 2300.
Aphididæ, 58, 198, 265, 518, 520, 1883, 2017, 2072, 2119, 2230, 2359, 2407.
Means against, 80, 102, 198, 508, 644, 678, 1148, 1184.
of the United States. Genera of the, 27.
Notes on the, 1678.
Aphis. Apple borer and root, 1038.
avenæ = Nectarophora granaria.
Aphis. Bad work of the grain, 1638.
bella *n. sp.*, 27.
brassicæ, 1365, 2291.
carduella *n. sp.*, 27.
cerasi = Myzus cerasi.
Cherry, 960.
Grain, 2394.
Grape-vine, 170.
Hop, 1001, 2291, 2394, 2418.
maidis, 23, 27.
mali, 59, 198, 201, 270, 291, 325, 413, 507, 539, 550, 579, 591, 883, 952, 996, 1056, 1139, 1429, 1899.
prunifoliæ, 678.
quercifoliæ *n. sp.*, 27.
ribis = Myzus ribis.
Root, 990, 1038.
rudbeckiæ = Nectarophora rudbeckiæ.
solani, 1679.
vitis, 27, 102, 170.
vs. rust. Grain, 1806.
Aphodius inquinatus, 1445.
Aphorista vittata, 2406.
Aphrophora, 93.
quadrangularis, 691.
Apiaries. Floating, 1785.
Apiculture. McLain, N. W. Experiments in, 2394.
Report on experiments in, 2363, 2418.
Apidæ, 2098.
Apion languinosum *n. sp.*, 197 = A. walshii.
Apioninæ. Gall-making genus of, 2231.
Apis mellifica, 13, 372, 441, 782, 833, 1455, 1774.
Aplodes, 40.
mimosaria, 40.
rubivora *n. sp.*, 1059 = Synchlora rubivora.
venustus = A. mimosaria.
Apple bark-lice on pears, 973.
louse, 1552.
Scurfy, 2305.
borer and root Aphis, 1038.
remedy, 1023.
borers, 870, 1583.
Coleophora, 1721.
Curculio, 1176, 1301, 1441, 2238.
go under ground to transform? Does the, 1228.
gall. Grape-vine, 1329, 1898.
growing on a grape-vine, 403, 436.
APPLE. INSECTS AFFECTING.
Acrobasis hammondi = Pempelia hammondi.
Amphicerus bicaudatus, 249, 485, 517, 633, 839, 893, 1163, 1311, 1329, 1747, 1776, 1820.
Anametis grisea, 2117.
Anthonomus cratægi, 1244.
quadrigibbus, 42, 1088, 1176, 1228, 1301, 2238.
Aphis mali, 201, 270, 335, 507, 539, 550, 579, 591, 883, 996, 1139, 1429.
Arctia virginica = Spilosoma virginica.
Aspidiotus conchiformis = Mytilaspis pomorum.
harrisii = Chionaspis furfurus.
rapax, 2235.
Attacus cecropia, 139, 1028, 1076, 1215.

APPLE. INSECTS AFFECTING—Continued.
Bostrichus bicaudatus = Amphicerus bicaudatus.
Brochymena annulata, 684.
Bucculatrix pomifoliella, 92, 1311, 1733.
Buprestis femorata = Chrysobothris femorata.
Capsus oblineatus = Lygus pratensis.
Carpocapsa pomonella, 330, 373, 467, 523, 565, 769, 1010, 1022, 1059, 1311, 1320, 1334, 1373, 1398, 1666, 1677, 1682, 1721, 2037.
Caterpillars, 1054.
Catydid, 29.
Cecidomyia sp., 963.
Ceresa bubalus, 2195.
Chætochilus pomonellus, 874.
Chilocorus bivulnerus, 731.
Chionaspis furfurus, 69, 345, 373, 579, 951, 1061, 1152, 2305.
Chloroneura malefica = Empoasca viridescens.
maligna = Empoasca obtusa.
Chrysobothris femorata, 20, 379, 537, 555, 634, 870, 1059, 1423, 1475, 1513, 1640, 2238, 2267.
Clisiocampa americana, 66, 77, 336, 1301, 2238.
Coccus harrisii = Chionaspis furfurus.
Cœlodasys unicornis, 749.
Coleophora malivorella, 1721.
Conotrachelus nenuphar, 1214.
Corycia vestaliata, 744.
Cybocephalus californicus, 2079.
Datana ministra, 467, 922, 2222.
Diaspis harrisii = Chionaspis furfurus.
Dipteron, 548.
Elaphidion parallelum = E. villosum.
villosum, 839.
Empoasca malefica = E. viridescens.
maligna = E. obtusa.
obtusa, 22.
viridescens, 22, 30.
Epicærus imbricatus, 296.
Eriosoma pyri = Schizoneura lanigera.
Euphoria melancholica, 842.
Euryomia melancholica = Euphoria melancholica.
Galls, 552.
Gastropachna americana, 812.
velleda = Tolype velleda.
Haltica punctipennis, 2383.
Helops micans, 963.
Hemipteron, 243.
Hyphantria cunea, 112, 2238.
textor = H. cunea.
Ithycerus noveboracensis, 869, 1033, 1085, 1188.
Iulus marginatus = Spirobolus marginatus.
Ixodes unipunctata, 1133.
Lagoa opercularis, 145, 796.
Larva, 758, 1054.
Lepidopteron, 243, 602.
Limacodes pithecium = Phobetron pithecium.
sp., 847.
Limenitis ursula, 145.
Lygus pratensis, 2.
Lytta cinerea = Macrobasis unicolor.
Macrobasis unicolor, 38.
Macrodactylus subspinosus, 748.
Minings, 532.
Mycetophila persicæ, 963.

APPLE. INSECTS AFFECTING—Continued.
Mytilaspis pomicorticis = M. pomorum.
pomorum, 69, 201, 345, 373, 423, 565, 951, 973, 982, 1059, 1061, 1329, 1552, 1772, 2238.
Notodonta concinna = Œdemasia concinna.
unicornis = Cœlodasys unicornis.
Oberea sp., 1850.
Œcanthus niveus, 1691.
Œdemasia concinna, 922.
Orgyia leucostigma, 1000, 1151, 2238.
Papilio glaucus, 1048.
turnus, 1048.
Pempelia hammondi, 810.
Pemphigus pyri = Schizoneura lanigera.
Phobetron pithecium, 1272.
Phoxopteris nubeculana, 1721.
Phycis indiginella, 511, 574, 810, 949, 975, 998, 1069, 1151.
Phycita nebulo = Phycis indiginella.
Polycaon confertus, 2103.
Prionus laticollis, 2287.
Psenocerus supernotatus, 1458.
Psocus venosus, 1263, 1526.
Reduvius raptatorius = Sinea diadema.
Saperda bivittata = S. candida.
calcarata, 963.
candida, 20, 67, 379, 421, 870, 962, 1023, 1038, 1059, 1213, 1332, 1441, 1513, 1608, 1630, 2238, 2266.
Schizoneura lanigera, 373, 467, 495, 963, 997, 1038, 1059, 1187.
Sciara mali, 211.
Sinea diadema, 638, 731.
Solenobia, 38.
Spilonota oculana = Tmetocera ocellana.
Spilosoma virginica, 296.
Spirobolus marginatus, 963.
Teras cinderella, 1311.
malivorana, 1311.
Tettigonia sp., 951.
Tineid, 77.
Tmetocera ocellana, 747.
Tolype velleda, 972.
Tortricid, 847.
Tremex columba, 1126.
Trypeta pomonella, 177, 373, 1320, 1553, 2119, 2238.
Urocerid, 893.
Xyleborus obesus, 1583.
Apple. Lappet caterpillars on the, 972.
Large green caterpillars on the, 1076.
leaf Bucculatrix, 1311.
crumpler, 574, 949, 975, 998.
mistaken for Curculio, 1069.
folder. The lesser, 1311.
sewer. Chapin's, 1721.
skeletonizer, 1311, 1322.
tyer. The green, 1311.
worm, 1322.
Small, 747.
maggot, 1553, 2119, 2238.
fly, 373, 1320.
and mountain ash. Plant-louse eggs on, 579.

- Apple. Oak, 1448.
  - Oyster-shell bark-louse of the, 1329, 2238.
  - and peach borers, 1475, 1513.
    - pear. Two new foes of the, 22.
  - pest. New, 2383.
  - Pigeon Tremex in, 1126.
  - plant-louse, 883.
  - Plum Curculio breeds in, 1214.
  - root-blight, 997.
    - borer, 2287.
    - plant-louse, 373, 495, 1059.
  - scions. Swellings on, 548.
  - Small reddish snout-beetle in, 1244.
  - snout-beetle or four-humped Curculio, 1088.
  - tree bark-lice, 345, 1089.
      - Native, 1152.
    - louse, 255.
    - borer, 1332, 1640.
      - Flat-headed, 1059, 1423, 2238, 2267.
      - in horse chestnut. Flat-headed, 1316.
      - Insect foes of the, 421.
      - New facts about the round-headed, 1630.
      - Oviposition of the round-headed, 2266.
      - Round-headed, 1059, 1608, 2238.
      - Variations in the two-striped 1213.
    - borers, 20, 67, 379, 962, 1059.
      - on south side of trees, 634.
    - bugs, 685.
    - caterpillar. Unicorn, 749.
    - caterpillars, 66, 874, 922, 1054.
    - cocoons, 139.
    - Egg-masses and cocoons on, 1000.
    - Insect foes of the, 467.
    - insects, 77, 145, 201, 276, 296, 514, 731, 1056, 1151, 1733.
    - Lappet caterpillar on, 812.
    - Large moth on, 1028.
      - worm on, 1048.
    - leaf crumpler, 574, 1311.
    - plant lice, 270, 335, 591, 996, 1429.
        - in Oregon, 1899.
        - Scab in apple *vs.*, 1139.
      - louse, 1127.
        - again. Eggs of, 550.
        - Eggs of the, 507, 539.
    - roots caused by root-lice. Knots in, 1187.
      - Insects affecting, 963.
    - scales, 69.
    - Tent caterpillars of the, 336, 1301, 2238, 2291.
    - tineid, 92.
    - web-caterpillar, 112.
    - worms, 511, 744, 810.
  - trees. Bark lice on, 423.
    - Eggs on, 638.
    - Injured, 537.
    - Insects clustered on, 1263.
    - Native bark-lice on, 1061.
- Apple trees. New York weevil on, 1085.
    - Scarred, 951.
    - Seed ticks under bark of, 1133.
    - South. Muscle-shaped bark louse on, 1774.
  - twig. Borer in, 839.
    - borers, 249, 485, 517, 633, 1163, 1311, 1329, 1747, 1776, 1820.
      - Flat-headed, 555.
    - Small borer in, 1458.
  - twigs. Catydid eggs on, 29.
    - Eggs on grape canes and, 1323.
    - Larva boring along the axis of, 1850.
    - Small galls and minings in, 552.
  - *vs.* apple-tree plant lice. Scab in, 1139.
  - Woolly, slug-like worm on, 796.
  - worm, 211, 330, 376, 1022, 1059, 1666.
    - in, 177.
    - natural history, remedies, 1373.
    - Notes on, 1682, 1721.
    - trap. Thomas Wier's, 1312.
  - worms, 523, 1010.
    - by machinery. Killing, 769.
    - Severe cold and hibernating, 769.
- Apples and codling-moth. Michigan, 1677.
  - Melancholy chafer in, 842.
  - Rose bug on, 748.
- Appliances. Remedies and, 2375.
- Applied entomology. General truths in, 2291, 2292.
- Apply soap, 1367.
- Appropriations for United States Entomological Commission, 1843.
- Aquatic larvæ, 1851.
  - Sphinx larva, 1951.
- Arachnida, 1955.
  - Characters, 59.
  - Poisonous, 2399.
- Aragnomus griseus, 2428.
- Aramigus fulleri, 1708, 1721, 1740, 2117.
  - Habits of, 1708.
- Archippus butterfly, 1301.
  - Pupa of, 1235.
- Architects. Galls and their, 518, 821.
- Arctia isabella = Pyrrharctia isabella.
  - virginica = Spilosoma virginica.
  - virgo, 674.
- Arctic insects, 2347.
- Arctiidæ, 2242.
- Argiope riparia, 830, 1299.
- Argynnis, 1301.
  - bellona, 1410.
- Argyramæba, 1959.
- Arhopalus = Cyllene.
  - infaustus = Cyllene decorus.
  - pictus = Cyllene pictus.
  - robiniæ = Cyllene robiniæ.
  - speciosus = Plagionotus speciosus.
- Aristolochia. Papilio philenor feeding on, 1774.
- Arizona. Ants injurious in, 1987.
- Arma spinosa = Podisus spinosus.
- Army-worm, 11, 17, 120, 670, 876, 906, 1127, 1442, 1482, 1551, 1570, 2119, 2239, 2267, 2269.
  - Additional notes, 2001.
  - and canker-worm, 910.
  - Complete life-history of the, 1670.

Army-worm. Eggs of the, 1484.
and its enemies, 10.
The fall, 1256, 1267. 1282, 1301, 1482.
Further notes on the, 2253.
Further notes and observations on the, 1856.
Hibernation of, 7, 8, 2086.
How it comes and goes, 1442.
Important point yet to ascertain in its history, 1442.
Ichneumon fly, 1127.
and its insect foes, 12.
Natural enemies, 1442.
history complete, 1551.
in New York and other Eastern States. Supposed, 1990.
Northern, 1835.
notes and inquiries; its work in clover, 1877.
in 1882, 2122.
Parasites, 6, 10, 1670.
Prospects. Chinch-bug and, 2087.
question, 8, 9.
Recent outbreaks, 2262.
remedies, 2090.
Supplementary notes, 1482.
True, 647.
vs. the clover hay worm, 2090.
in the West. Genuine, 2009.
Wheat-head, 1570, 2418.
worms. Canker-worms not, 1304.
Prof. Riley on, 1800.
Three so-called, 328.
What are, 1400.
Arrow-weed. Carpocapsa saltitans on, 2173.
ARTEMESIA. INSECTS AFFECTING.
Cochylis hilarana, 1059.
Galls, 1347.
Articulates, Yersin. Function of the nervous system of, 1959.
Arzama densa, 2357.
obliquata, 2223.
Asaphes memnonius, 1874.
Asclepias. Larva on, 1535.
Asemum mœstum, 2267.
Asexual females. Lichtenstein's theory as to dimorphic, 2072.
Ash. Borers in black, 1733.
Cocoons on the flowering, 950.
colored locust, 2363.
destroyers. Linden and, 1847.
gray blister beetle, 1209, 1558.
leaf-bug, 1127, 1423, 2418.
pinion, 1301.
ASH. INSECTS AFFECTING.
Attacus promethea, 950.
Fatua denudatum, 1733.
Hyphantria cunea, 1733.
textor = H. cunea.
Neoclytus capræa ? 1849.
Parandra brunnea, 1733, 1876.
Trochilium denudatum = Fatua denudatum.
Xyloryctes satyrus, 471.
Ash larva. Prickly, 1914.
and mountain ash, 705.
Plant-louse eggs on apple and mountain, 579.
Ash root-borer, 1876.
saw-fly, 2291.
trees in the nursery. Holes around the roots of, 471.
Ashmead, W. H. Report on insects injurious to garden crops in Florida, 2388.
Ashy-gray lady-bird, 2119.
Asia Minor. Bombylid larvæ destroying locust eggs in, 2118.
Asilid larva, 1643.
Asilidæ, 1543.
Asilus, 660, 668, 1127.
flies, 1127, 1543, 1558, 1643, 1959.
fly. Large, 668, 1269.
missouriensis *n. sp.*, 1127 = Proctacanthus milberti.
sericeus, 668, 1543.
Asopia costalis, 83, 675, 948, 993, 1132, 1363, 2090.
farinalis, 980, 2337.
olinalis, 1363.
Asparagus beetle, 524.
ASPARAGUS. INSECTS AFFECTING.
Crioceris asparagi, 524, 2135.
12-punctata, 2135.
Aspidiotus, 1, 389.
aurantii, 2394.
conchiformis = Mytilaspis pomorum.
harrisii *n. sp.*, 2 = Chionaspis furfurus.
pinifolii = Chionaspis pinifolii.
rapax, 2235.
salicis-nigræ *n. sp.* = Chionaspis salicis.
Aspidoglossa subangulata, 372.
Aspila virescens, 1689, 2343.
ASTER. INSECTS AFFECTING.
Diabrotica vittata, 148.
Epicauta pennsylvanica, 38.
Gortyna nitela, 75, 940.
Lytta atrata = Epicauta pennsylvanica.
Aster stalk borer. Dahlia and, 940.
Astoma gryllarium = Trombidium locustarum.
locustarum = Trombidium locustarum.
Trombidium developed from, 2071.
Athysanus maritima, 2116.
Atlanta cotton convention address, 2038.
Atomizers. Sprinklers and, 1857.
Atlantic migratory locust, 1423, 1625.
Atta fervens, 1964, 2532.
Attacus angulifera, 1311.
cecropia, 139, 209, 238, 277, 287, 297, 542, 629, 635, 786, 832, 841, 911, 1028, 1029, 1076, 1112, 1215, 1249, 1311, 1533.
cynthia, 542, 899, 1179, 1311, 1343, 1460, 1718, 2204.
luna = Actias luna.
polyphemus = Telea polyphemus.
promethea, 259, 268, 604, 629, 950, 1311, 1486, 1797, 2204.
ricini, 1718.
Attagenus injuring feathers, 56.
megatoma, 2113.
Attractive but untrue, 1644.
Attus, 2302.
Aulax, 318.
Austrian pines. False caterpillars on Scotch and, 1011.

Azalea. Beetles on, 156.
Prasocuris varipes on, 156.
Bacillus alvei, 2418.
Back-rolling wonder, 1363.
Bacterial disease of the imported cabbage-worm 2251.
Bacterium, 2251.
Bad packing, 837.
Bætis femorata = Silphlurus femoratus.
interlineata *n. sp.*, 39 = Silphlurus femoratus.
sicca *n. sp.*, 24.
Bætisca *n. g.*, 24.
obesa. Pupa of, 43.
Bag-worm, 1059, 1090, 1189, 1650, 2378.
New, 1441.
at South Pass, Ill., 1156.
Thyridopteryx ephemeræformis. Remarks on, 2272.
worms, 182, 266, 538, 641, 738, 1036.
again, 815.
and borers, 1472.
Ways of, 1424.
Bahia, Brazil. Cotton culture and the insects affecting the plant at, 1788*a*.
Bailey, J. S. Tree borers of the family Cossidæ, 2253.
Balaninus rectus, 1310, 1311.
Balsam fir. Lachnus strobi on, 1039.
Bamboo Sinoxylon, 2454.
Banded Ips in calyx of pear, 1239.
Baridius sesostris = Ampeloglypter sesostris.
trinotata = Trichobaris trinotata.
Bark beetles, 295.
borer. Hickory, 938, 1329.
Peach-tree, 2047.
borers, 226.
boring beetles. Packard on the development of, 2267.
lice, 1, 264, 935, 944, 989, 994, 1007.
again, 1040.
on apple-trees, 423, 1059.
Native, 1061.
Curculio and, 487.
eggs in Missouri. Supposed, 1084.
on grape-vine, 1212.
Maple, 1004.
Means against, 104.
Native apple-tree, 1152.
on the pear, 982.
pears. Apple, 973.
Preventive of, 1012.
remedy, 896.
on rose bushes, 1303.
louse, 987, 1397, 1583.
Apple, 1552.
on apple-trees South. Muscle-shaped, 1774.
enemy, 154.
Imported apple-tree, 255.
Insect foes of the, 417.
in Missouri. Oyster-shell, 1169.
on Osage orange, 389.
Oyster-shell apple, 1127, 1329, 2238.
Scurfy apple, 2305.
Tulip-tree, 271.
BARLEY. INSECTS AFFECTING.
Lachnosterna fusca, 2394.
Nectarophora granaria, 2394.
Schizoneura sp., 2394.
Siphonophora avenæ = Nectarophora granaria.
Barley-root louse, 2394.
F. M. Webster. Insects affecting, 2394.
Barnard, W. S. Machinery for destroying Aletia, 2343.
Tests of machinery for destroying the cotton-worm, 2253.
Basket-worm, 271, 1059, 1090, 1650.
Bass. Insects from stomach of rock, 1793.
Larvæ in stomach of black, 1792.
Bassus bicapillaris *n. sp.*, 385.
ruficrus *n. sp.*, 385.
semifasciatus *n. sp.*, 385.
tripicticrus *n. sp.*, 385.
Base-wood. Dipteron on, 548.
Batrachedra salicipomonella, 821.
Bazille, Louis. Obituary, 2370.
Be on the guard, 708.
BEAN. INSECTS AFFECTING.
Bruchus fabæ, 1301, 1631, 2127, 2238.
granarius, 1120.
obsoletus, 1155, 1232, 1296.
Epilachna corrupta, 2235.
Lytta cinerea = Macrobasis unicolor.
Macrobasis unicolor, 38.
Bean. A new enemy to, 2418.
weevil, 1155, 1296, 2127, 2238.
American, 1301.
Beans. Buggy, 1631.
Beautiful wood nymph, 1127, 1363.
Bed bugs, 1502.
Lepidium *vs.*, 1741.
Bedeguar of the rose, 1939.
Bee bread devoured by worms, 1293.
Bug preying on honey, 13.
disease. Possible cause of the, 704.
enemy, 1186.
fly, 1959.
killer. Nebraska, 1127, 1311.
killers, 1543.
Beetle named, 627.
Remarkable felting caused by a, 2113.
in Russia. Excessive injury by, 1935.
on sugar maple, 1014.
in thistle, 169.
Beetles, 1736.
around peach-trees, 751.
Food-habits of ground, 1760.
in dried English currants, 1260.
in flouring-mills, 1261.
injuring cabbages and fuchsias, 1868.
in stomach of meadow lark, 1013.
in the corn-field, 2317.
Mites parasitic on, 315.
named, 732, 802, 806, 1172, 1187.
on buttercup and azalea, 156.
Plant-feeding habits of predaceous, 1956.
supposed to be feeding on wheat, 1746.
swarming about the lawn, 718.
under dead fish, 817.
working in wheat, oats, and rye, 1259.
Belated individuals of the periodical Cicada, 648.

Belfrage, G. W. Obituary, 2161.
Belostoma americanum, 473, 534, 733, 1570, 1584.
grande = B. americanum.
Belvoisia bifasciata, 1329, 2343.
Bembecia marginata, 576, 1363, 1454.
rubi = B. marginata.
Bembex fasciata, 543.
marginata, 2230.
Bembidium 4-maculatum, 3.
Bennett, T. Report of experiments at Trenton, N. J., 2344.
Berberry. Aphididæ on, 644.
Berne. Phylloxera convention at, 2147.
Berry and cherry twigs, 1503.
Beschreibung einer den Birnen schädlichen Gallmücke, 2392.
Best's fruit-tree invigorator again, 530.
invigorator once more, 545.
Betula nigra. Acronycta on, 2280.
Bibio albipennis, 257, 683.
Bibionidæ, 2076.
Bibliography of gall literature, 2059.
Bidens chrysanthemoides. Syrphus sp. caught by, 1761.
Bill bug. Corn, 2291, 2418.
Biorhiza forticornis, 41, 745.
Birch. Clytus sp. ? on, 2267.
Bird question dispassionately considered, 1768.
Birds. Professor Riley in favor of the, 1675.
Relation of Carabidæ and Coccinellidæ to, 2152.
vs. insects, 199, 369.
Bittacus apterus. Habits of, 2092.
Bitten by an aphid, 2205.
Bitter-sweet. Enchenopa binotata on, 1913.
White waxy secretion on stems of, 1913.
Black ants in gardens. Destroying, 438.
ash. Borers in, 1733.
bass. Larva in stomach of, 1792.
blister beetle, 1059, 1558.
beetles on potatoes, 1381.
breeze fly, 1127.
bug, 314.
currant. Currant-worms and, 1079.
grape-vine caterpillars, 1018.
knot once more, 930.
legged tortoise beetle, 1127.
potato beetles. Large, 1206.
rat blister beetle, 1059, 1558.
walnut. Insects feeding on sap of, 1195.
and willow. Enemies of the, 2333.
Blackberry borers, 302.
cane borers, 576.
gall insects, 318.
Pithy, 1131.
Galls on, 263.
BLACKBERRY. INSECTS AFFECTING.
Ægeria rubi = Bembecia marginata.
sp., 302.
Agrilus ruficollis, 1771.
Bembecia marginata, 576, 1364, 1454.
Diastrophus cuscutæformis, 609.
nebulosus, 263, 610, 1131.
sp., 318.
Eudemis botrana, 1232.
BLACKBERRY. INSECTS AFFECTING—Continued.
Lecanium sp., 117.
Lobesia botrana = Eudemis botrana.
Oberea bimaculata, 302, 783, 1363.
perspicillata = O. bimaculata.
tripunctata, 1503.
Œcanthus niveus, 1503.
Psylla rubi = Trioza tripunctata.
Trioza tripunctata, 669.
Blackberry. New insect foe of the, 669.
and raspberry canes. Gouty galls on, 1771.
scale, 117.
twig. Fuzzy galls on, 609.
Pithy galls on, 610.
Blastobasis iceryæella *n. sp.*, 2394.
Blastophysa *n. sg.*, 2272.
celtidis-gemma *n. sp.*, 2272.
Blatta, 2267.
germanica = Ectobia germanica.
Blattidæ, 573, 1858.
Blennocampa pygmæa, 1056, 1252.
Blepharida rhois, 849, 1363.
Blepharoceridæ, 1981, 2004.
Blight. Apple-root, 997.
Blind-eyed Smerinthus, 1912.
Going it, 588.
as those who shut their eyes. None so, 275.
Blissus leucopterus, 6, 90, 180, 398, 548, 886, 888, 890, 891, 894, 895, 1068, 1127, 1357, 1402, 1423, 1432, 1453, 1508, 1538, 1681, 2018, 2039, 2048, 2087, 2119, 2143, 2237, 2252, 2271, 2418.
Blister beetle. Ash-gray, 1059, 1209, 1558.
Black, 1059, 1558.
rat, 1059, 1558.
Margined, 1059, 1558.
on potatoes. Black, 1381.
Retarded development in, 1860.
Striped, 1059, 1558.
beetles, 134, 289, 301, 362, 1059, 1558, 2238, 2418.
Larval characters and habits of, 1600.
from New Mexico, 1796.
Notes on life-history of, 1651.
Pear leaf, 1739.
Blood-red lady-bird, 2119.
sucker and pear slug, 1253.
sucking cone-nose, 795, 854.
Conorhinus, 2291.
Blow-fly. Cheese-fly and, 1266.
Bluebird. Ichneumonid from stomach of, 1878.
Larvæ from stomach of, 1871.
Bluebirds feeding on parasitic and predaceous insects, 1885.
Blue caterpillars of the vine, 1127, 1363.
spangled peach-worm, 1301.
Bogus chinch-bug, 1127, 1423.
Colorado potato-beetle, 1558.
bug, 519.
Thrips. True Thrips and, 203.
Yucca moth. True and, 1804.
Boll-worm, 821, 1301, 1353, 2119, 2164, 2343.
Report on, 2164.
worms feeding on cabbage, 1915.
Bombardier beetle, Kansas, 1311.

Bombus, 800, 1032, 1226.
Hibernation of the queens of, 1032.
pennsylvanicus, 800.
virginicus, 1774.
Bombycidæ, 1718.
Bombylid larvæ destroying locust eggs in Asia Minor, 2118.
Bombylii, 1959.
Bombyliidæ, 2118.
Larval habits, 1947, 2169.
Life-habits, 2002.
Natural history of certain, 1928.
Bombylius major, 1947, 1959.
Bombyx arrindria, 899.
mori = Sericaria mori.
Bordered soldier bug, 1059.
Borer, 47.
Borers, 55, 141, 233, 967, 1083.
Bag-worms and, 1472.
Brimstone for, 931.
Canker-worms and, 941.
Tansy for, 1016.
Boston. Entomologists at, 1894.
Bostrichus = Amphicerus.
bicaudatus = Amphicerus bicaudatus.
Botis. Cauliflower, 2232.
repetitalis, 2232.
Bot flies, 114.
fly. Cattle, 2238.
Horse, 2238.
Sheep, 2238.
Squirrel, 526.
Botrytis rileyi, 2232.
Bots, 1563.
Bowels. Larvæ in human, 382.
Box Psylla, 2291.
Brachinus, 802.
americanus, 802.
Brachyrhynchus, 553.
Brachytarsus variegatus, 18, 1461, 1479.
Bracon charus *n. sp.*, 1423.
Cherished, 1423.
scolytivorus *n. sp.*, 1329.
Bradynotes opimus *n. sp.*, 1959.
Brandt on nervous system of insects, 2225.
Branner, J. C. Cotton-caterpillars in Brazil, 2343.
Preliminary report of observations upon insects injurious to cotton, orange, and sugar-cane in Brazil, 2277.
Brauer on Hirmoneura. Review of, 2275.
Braula cœca not particularly injurious to the honey-bee, 1982.
Brazil. Branner, J. C., on cotton-caterpillars in, 2343.
insects injurious to cotton, orange, and sugar-cane in, 2277.
Lignified snake of, 2136.
Breakfast. Entomological, 2311.
Breeding-cages, 695.
silk-worms, 1648.
Breeze-fly. Black, 1127.
Brenthian. Northern, 1363.
Brimstone for borers, 931.
British pest, 2413.
Broad-necked Prionus. Eggs of, 1329.
winged katydid, 1329, 1363.
Brochymena annulata, 684.
Brown mantispian, 1243.
Brown's answer to inquiries about Colorado potato-beetle. Mayor, 1491.
Bruchus of Europe just imported. Grain, 1120.
fabæ *n. sp.*, 1301, 1631, 2127, 2238.
Grain, 1301.
granarius, 1120, 1301.
obsoletus, 1155, 1232, 1296.
pisi, 434, 1120, 1301, 1357, 1916, 2238.
Bruner, L. Additions to the chronology of locust ravages in 1880–'81, 2267.
List of North American locusts, 2267.
Notes on other locusts and the western cricket, 2267.
from Nebraska, 2291.
Observations in the Northwest on the Rocky Mountain locust, 2165.
on the Rocky Mountain locust and other insects in the Northwest during the summer of 1883, 2277.
Report on the abundance of the Rocky Mountain locust in 1885, 2363.
locusts in Texas in spring of 1886, 2382.
Nebraska insects, 2382.
of the season's observations in Nebraska, 2418.
on the Rocky Mountain locust in Montana in 1880, 2267.
the Rocky Mountain locust in Wyoming and Montana, etc., in 1881, 2267.
Bucculatrix. Apple-leaf, 1311.
pomifoliella, 92, 1311, 1733.
thuiella, 1311.
Buck fly, 595.
moth, 1329.
Buckeye leaf. Sericoris claypoleana on, 2114.
stem-borer, 2114.
Buckwheat to destroy insects. Use of, 1744.
Webster on insects affecting, 2394.
Bud-eating insects, 1408.
Buffalo. Entomology in, 2035.
gnat problem in the Lower Mississippi Valley, 2416.
Southern, 2291, 2394, 2418.
gnats, 2394.
Webster on, 2388.
tree hopper, 415, 1329.
injurious to potatoes, 2107.
Bug. A most precious, 575.
Buggy beans, 1631.
peas, 1916.
Bug-hunter in Egypt, 372.
hunters. Cruel, 440.
Bugs, 354.
in alcohol, 605.

Bugs. Hogs *vs.*, 387.
Our, 2374.
Toads *vs.*, 1103.
Buhach. Coquillett on the production and manufacture of, 2364.
Bulletin Div. Ent. U. S. Dept. Agric., No. 1, 2164.
2, 2165.
3, 2253.
4, 2277.
6, 2304.
8, 2315.
9, 1724.
10, 2378.
11, 2344.
12, 2364.
13, 2382.
14, 2388.
15, 2389.
Michigan Agric. College, No. 39 (Review), 2501.
United States Entomological Commission, No. 1, 1577.
2, 1578.
3, 1736.
6, 2026.
Bumble-bees *vs.* red-clover, 2376.
What becomes of, 1032.
Bundle of entomological queries, 556.
Buprestidæ, 821, 2267.
Buprestis divaricata = Dicerca divaricata.
femorata = Chrysobothris femorata.
Burr-oak. Insects stripping the, 966.
Burgess, E. Anatomy of Aletia, 2343.
Burying beetles, 315, 845.
Bushels of butterflies, 238.
Butalis cerealella, 1232.
Buteo pennsylvanicus, 643.
Buthus carolinianus, 453, 1119.
Butler, A. W. The periodical Cicada in southeastern Indiana, 2364.
Buttercup. Beetles on, 156.
INSECTS AFFECTING.
Adimonia rufosanguinea, 156.
Galeruca rufosanguinea = Adimonia rufosanguinea.
Butterflies. Bushels of, 238.
caught by the tongue, 1761.
Controlling sex in, 1352.
Effects of cold applied to the chrysalids of, 1778.
Hackberry, 1356, 1363.
Imitative, 613.
Migrations, 1770, 1991.
Migratory, 1622, 1635.
named, 461.
of New England. Notice of Scudder's, 2464.
North America. Review of Edward's, 395, 479, 623, 827.
Odor in, 2025.
Philosophy of the pupation of, 1711.
Swarm of, 406, 1050.
Butterfly chrysalis, 1535.
Goat-weed, 1117, 1127, 1329.
larva. Carnivorous, 2359.
Butterfly larva injurious to cotton squares, 1872.
pine-trees, 2121.
larvæ. Summer dormancy of, 1410.
named, 666.
tongue, 1815.
trees of Monterey again, 2052.
wings. Chemical change in color of, 1935.
Byrsocrypta pseudobyrsa *n. sp.*, 27.
vagabunda *n. sp.*, 27.
Cabbage Anthomyia, 2291.
bug. Harlequin, 1099, 1311, 1534, 2238, 2263, 2291.
butterfly. Imported, 1127, 2291.
Larger, 2232.
Southern, 1127, 2232, 2238.
cut-worms, 2291.
Remedies for, 2291.
flea-beetle. Colorado, 2291.
insects, 1297, 2291, 2418.
CABBAGE. INSECTS AFFECTING.
Agrotis annexa, 2291.
clandestina, 2291.
malefida, 2291.
messoria, 2291.
saucia, 2291.
telifera = A. ypsilon.
ypsilon, 626, 2291.
Anthomyia brassicæ, 2291.
Aphis brassicæ, 1365, 2291.
Botis repetitalis, 2232.
Caloptenus spretus, 2291.
Doryphora 10-lineata, 2291.
Elaterid, 740.
Epicærus imbricatus, 1868.
Hadena devastatrix, 2291.
Heliothis armigera, 1915.
Lygus lineolaris = L. pratensis.
pratensis, 2291.
Mamestra chenopodi = M. trifolii.
picta, 1127, 2232.
subjuncta, 2291.
trifolii, 2232.
Murgantia histrionica, 1097, 1297, 1311, 1534, 2238, 2263, 2291.
Nysius angustatus, 2291.
Oscinis, 2291.
Phyllotreta albionica, 2291.
vittata, 2291.
zimmermani, 2291.
Pieris monuste, 2232.
oleracea, 835, 1127, 2232, 2238.
protodice, 1127, 2232, 2238.
rapæ, 1127, 1257, 1279, 1294, 1694, 1721, 2221, 2232, 2238, 2251, 2298.
Pionea rimosalis, 1915, 2232.
Plusia brassicæ, 1127, 2232, 2238.
Plutella cruciferarum, 1291, 1297, 2232.
Strachia histrionica = Murgantia histrionica.
Cabbage-lice, 1365.
Mamestra, 2232.
Oscinis, 2291.
pest. Our new, 1257.
pests, 740.
Pionea, 2232.
plant-louse, 2291.

- Cabbage plants. Cut-worms severing, 626.
  - Plusia, 1127, 2232, 2238.
  - Plutella, 1291, 2232.
  - worm. Bacterial disease of the imported, 2251.
    - Imported, 2232, 2238, 2291.
    - A new remedy for the imported, 2298.
    - parasite, 2221.
    - in the South. The imported, 1714.
    - Successful introduction of a parasite of the imported, 2291.
    - The westward progress of the imported, 1694, 1721.
    - Zebra, 2232.
  - worms, 835, 1127, 1279, 1915, 2232.
    - upon gillyflowers, 614.
    - Remedy for, 1920, 2232.
    - Safe remedies for, 1948.
- Cabbages and fuchias. Beetles injuring, 1868.
- Cabinet pests. Means against, 1057.
- Cacœcia fractivittana, 2475.
  - rileyana, 1059, 1192.
  - rosaceana, 735.
  - v-marked, 2363.
- Cactus lady-bird, 2119.
- Caddis-worms. Carnivorous habits of, 1839.
- Calandra granaria, 510, 586, 1259, 1673, 1683, 1742.
  - oryzæ, 510, 1673, 1683.
  - remotepunctata, 15.
- Calaphis *n. g.*, 27.
  - betulella *n. sp.*, 27.
- Calathus gregarius, 2418.
- California. Chinch-bug, 2431.
  - Fruit insects in, 2245.
  - Fuller's rose-beetle in, 1740.
  - Grape Phylloxera in, 1727.
  - Grasshopper ravages in, 2323.
  - Injurious insects in, 2074.
  - Interest in economic entomology in, 2053.
  - Introduction of Lestophonus iceryæ into, 2522.
  - Locust ravages in, 1959.
  - migratory locust, 2363.
  - Overflow bug in, 2099.
  - Phylloxera in, 2140.
  - Promotion of silk-culture in, 2006.
  - red scale, 2394.
  - Winged Phylloxera in, 1895.
- Californian locust, 1959.
  - orange insects, 2373.
- Callidium antennatum, 50, 319.
  - janthinum, 50, 319.
- Callidryas philea, 1271.
  - Secondary sexual characters of, 1784.
- Callimorpha fulvicosta = C. lecontei.
  - lecontei, 1301.
  - sp., 1871.
  - vestalis = C. lecontei.
- Calliphora, 1390.
  - vomitoria, 1266.
- Callipterus, 1678.
- Callochlora viridis = Parrasa chloris.
- Callosamia angulifera = Attacus angulifera.
- Callosamia promethea = Attacus promethea.
- Callostoma fascipennis, 2075, 2118.
- Calocoris chenopodi, 2458.
  - rapidus, 2363.
- Calomicrus. Characters of, 1799.
- Calophya nigripennis *n. sp.*, 2272.
- Caloptenobia *n. g.*, 1643 = Scelio.
  - ovivora *n. sp.*, 1643 = Scelio famelicus.
- Caloptenus, 2267.
  - atlanis *n. sp.*, 1423, 1549, 1643, 2198, 2232, 2363.
    - Packard on the development of, 2267.
  - bivittatus, 1959.
  - devastator, 2323, 2377.
  - differentialis, 1423, 1549, 2323.
    - Epidemic disease of, 2240
  - Dimorphism in, 1889.
  - femur-rubrum, 147, 475, 1423, 1437, 1451, 1549, 1598, 1643, 2471.
    - Mite infesting, 146.
  - spretus, 147, 368, 373, 475, 536, 926, 929, 1423, 1433, 1434, 1437, 1451, 1452, 1456, 1473, 1481, 1482, 1488, 1492, 1493, 1494, 1495, 1501, 1521, 1527, 1532, 1538, 1541, 1549, 1555, 1557, 1562, 1564, 1565, 1566, 1567, 1570, 1571, 1572, 1573, 1575, 1576, 1577, 1578, 1582, 1585, 1588, 1596, 1598, 1612, 1613, 1614, 1615, 1617, 1643, 1669, 1674, 1693, 1959, 1994, 1998, 2003, 2005, 2007, 2040, 2044, 2057, 2267, 2276, 2291, 2335, 2366.
    - (See also Locust; Rocky Mountain locust.)
    - Agricultural bearings of, 1643.
    - Aid of animals against, 1643.
    - Air-sacks of, 1959.
    - Anatomy of, 1643.
    - Animals as foes to, 1643.
    - Autumn flights in 1877, 1643.
    - Birds that feed on, 1643.
    - Brain of, 1959.
    - Breeding-grounds of, 1643.
    - British-American data, 1643.
    - Characters, 1625.
    - Chronological history, 1625.
    - Chronology of ravages, 1643, 1959.
    - Classification, 1643.
    - Colorado data for 1877, 1643.
    - Crops as affected by, 1643.
    - Dakota data, 1643.
    - Destruction (devices for), 1643.
      - (means of), 1643.
    - Development of, 2267.
      - as influenced by meteorological conditions, 1959.
    - Devices for destruction of, 1643.

- Caloptenus spretus. Distribution of, 1625, 1643, 1959.
    - (southern limits of), 1959.
  - Effects that follow severe injury, 1643.
  - Eggs, 1643.
    - in same ground for two consecutive years, 1643.
  - Enemies (invertebrate), 1643.
    - (natural), 1625, 1959.
    - (vertebrate), 1643.
  - Fires (influence of prairie), 1643.
  - Flight, 1959.
    - (powers of), 1959.
  - Flights in 1877 (autumn), 1643.
    - from 1877 to 1879, 1959.
  - General considerations, 1625.
  - Habits, 1625, 1643.
    - (at night), 1643.
  - Histology, 1643, 1959.
  - Injury (effects that follow severe), 1643.
  - Invertebrate enemies of, 1643.
  - Iowa data, 1643.
    - for 1877, 1643.
  - Kansas data for 1877, 1643.
  - Losses caused by, 1643.
  - Means against, 1959.
  - Metamorphoses, 1643.
  - Meteorological conditions (influence of, on migrations), 1959.
  - Migrations, 1643, 1959.
    - (influence of meteorological conditions on), 1959.
    - in 1877, 1643.
  - Minnesota data, 1643.
    - for 1877, 1643.
  - Missouri data for 1877, 1643.
  - Native home, 1625.
  - Natural enemies, 1625, 1959.
  - Natural history, 1625, 1643.
  - Nebraska data, 1643.
    - for 1877, 1643.
  - New Mexico data, 1643.
  - Night habits of, 1643.
  - Nomenclature, 1643.
  - Parasites on eggs, 1612.
  - Permanent breeding-grounds of, 1643.
  - Powers of injury, 1625.
  - Practical considerations, 1625.
  - Prairie fires and, 1643.
  - Previous visitations of, 1643.
  - Ravages of (chronology of), 1643, 1959.
    - (east of the Mississippi), 1625.
    - (relative to agriculture), 1959.
- Caloptenus spretus. Remedies, 1643.
  - Statistics of losses caused by, 1643.
  - in the temporary region after the departure of the return swarms, 1643.
  - Texas data, 1957.
    - for 1877, 1643.
  - Transformations, 1625.
  - travel. Direction in which young, 1643.
  - Uses of, 1643.
  - Utah data, 1643.
  - Vertebrate enemies of, 1643.
  - Visitation of, 1643.
  - Weather (effects of), 1643.
  - Wings (time of year when acquired), 1643.
  - Young in country where they hatch, 1625.
- Calopteron and Photinus. Food of, 2358.
  - reticulatum, 806.
  - terminale, 806, 2358.
- Calosoma calidum, 721, 1274, 1314, 1357, 1672.
  - scrutator, 1226, 1898.
- Calves. Lice on, 889.
- Cambala annulata, 193, 236.
  - multistriatus=C. annulata.
- Camel cricket, 1059.
- Camnula atrox, 1959.
  - pellucida, 1959, 2044, 2313, 2363.
- Campoplex fugitiva=Limneria fugitiva.
- Camptonotus scudderi, 2276.
- Campyloneura vitripennis, 1301.
- Canadian Entomologist (Review), 395, 479, 827.
- Canker-worm, 86, 172, 1021, 1066, 1127, 1363, 2012.
  - again, 173.
  - Army-worm and, 910.
  - Cure for, 1426.
  - Fall, 1423, 1482, 2238.
  - Howell, A. J. Experience with the Spring, 2267.
  - once more, 274.
  - parasite, 717.
  - Spring, 1423, 1482, 2238.
  - worms, 91, 96, 302, 1482, 2267, 2270.
    - not army-worms, 1304.
    - Borers and, 941.
    - Concerning, 2149.
    - Remarks on, 1438.
    - at the West, 1539.
- Canna flavida. Pamphila ethlius feeding on, 1897.
  - Hesperid larva feeding on, 1897.
- Cannibal mites, 624.
- Cantharis cinerea=Macrobasis unicolor.
  - vesicatoria, 2118.
- Canthon chalcites, 1172.
  - hudsonias=C. lævis.
  - lævis, 1172, 1386.
- Cape. Grape Phylloxera not at the, 1841.
- Capitalizing specific names, 2170, 2257.
- Capnia minima, 1141.
- Capsus oblineatus=Lygus pratensis.
  - 4-vittatus=Pœcilocapsus lineatus
- Carabidæ, 1537, 1726, 1738, 1760, 1956.

Carabidæ and Coccinellidæ to birds. Relations of, 2152.
Food relations of, 2151.
Curculio-feeding habits of, 372.
Horn's classification of, 2051.
Mode of oviposition of, 2341, 2355.
Care of entomological specimens. On the, 2290.
Carnivorous. Are honey-bees, 2098.
butterfly larva, 2359, 2361.
habits of caddis-worms, 1839.
propensities of plant-feeders, 1867.
Carolina sphinx, 1262.
Carpet-beetle. The imported, 1699.
Trapping the, 1752.
bug, 1659.
pests, 1663.
Carpets in Texas. A tineid on, 2531.
Carpocapsa, 934.
pomonella 57, 307, 330, 367, 373, 377, 387, 454, 467, 523, 565, 769, 977, 1010, 1022, 1056, 1059, 1254, 1301, 1311, 1320, 1329, 1334, 1363, 1373, 1394, 1398, 1476, 1496, 1609, 1666, 1695, 1721, 1887, 2037, 2230, 2261, 2293, 2418.
saltitans, 1496, 1609, 2163, 2173.
Carrying out the law, 1993.
Carteria laccæ, 2119.
larreæ, 2119.
mexicana, 2119.
Case-bearer. Dominican, 1363.
Lepidopterous, 260.
Walnut, 1311.
Cassida, 94, 1238.
aurichalcea = Coptocycla aurichalcea.
bivittata, 681, 993, 1127, 1510.
clavata = Coptocycla clavata.
nigripes, 1127, 1510, 1697.
pallida = Coptocycla aurichalcea.
5-punctata *n. sp.*, 767 = Physonota unipunctata.
texana, 2096, 2215, 2235.
Cassididæ, 105, 767, 973, 1056, 1082, 1510.
Castor bean. Locusts eat the, 1645.
Catalogues and monographs, 1765.
Catalogus coleopterorum, 1866.
Catalpa sphinx, 2119, 2291.
Cat-bird. Tipula eggs in stomach of the, 1735, 1745.
Catcher. Dr. Hull's Curculio, 651.
Caterpillar nuisance, 1995.
Caterpillars named, 857, 1276.
Stinging, 1748.
Catocentrus *n. g.*, 385.
Cattle bot-fly, 2238.
Catydid eggs, 29, 247.
as an enemy to Doryphora 10-lineata, 313.
Catydids. Food of, 143, 241.
Cauliflower Botis, 2232.
Cause of variation in organic forms, 2460.
Cave fauna of Kentucky. Coleopterous, 2033.
Cecidomyia, 1077, 1461.
albovittata *n. sp.*, 46.
carbonifera, 1924.
cornuta *n. sp.*, 46.
Cranberry, 194.
cratægi-bedeguar *n. sp.*, 376.
cupressi-ananassa *n. sp.*, 1180.
destructor, 6, 62, 122, 150, 157, 250, 426, 494, 711, 1506, 1581, 1587, 1665, 1690, 1721, 1787, 2008, 2031, 2235, 2267, 2331, 2365, 2395, 2398.
impatientis, 852.
leguminicola, 1690, 1721, 2238.
orbitalis *n. sp.*, 46.
oryzæ, 1949.
q.-pilulæ *n. sp.*, 41, 799.
q.-symetrica, 799.
s.-ænigma *n. sp.*, 46 = Acarus s.-ænigma.
s.-batatas *n. sp.*, 46.
s.-brassicoides *n. sp.*, 46, 518.
s.-cornu *n. sp.*, 46, 197.
s.-coryloides *n. sp.*, 46, 518.
s.-gnaphalioides *n. sp.*, 46.
s.-hordeoides *n. sp.*, 46.
s.-nodulus *n. sp.*, 46.
s.-rhodoides *n. sp.*, 46.
s.-semen *n. sp.*, 46 = Acarus s.-semen.
s.-siliqua *n. sp.*, 46, 1170.
s.-strobiliscus *n. sp.*, 46, 197.
s.-strobiloides *n. sp.*, 46, 518.
s.-triticoides *n. sp.*, 46.
s.-verruca *n. sp.*, 46.
secalina, 2267.
solidaginis, 798.
sp., 799, 963.
tritici = Diplosis tritici.
tubicola, 1232.
v.-coryloides *n. sp.*, 518, 1329.
v.-lituus = C. v.-viticola.
v.-pomum *n. sp.*, 403, 518, 1281, 1329, 1898, 2136.
v.-viticola, 791, 1077, 1116, 1329.
Cecidomyid gall on Cratægus, 376.
in wheat, 18.
Cecidomyidæ, 294, 518, 799.
on grape. Galls of, 111.
salix. Galls of, 46, 197.
new species, 46.
Cecil's books of natural history (Review), 506.
Cecropia Cryptus, 1301.
moth, 1112.
caterpillars, 786.
cocoon, 635.
silk-worm, 1311.
Remarkable abundance of, 2511.
Tachina fly, 1311.
worm, 1215, 1249.
on elder, 1533.
CEDAR. INSECTS AFFECTING.
Callidium antennatum, 319.
janthinum, 319.
Cerambycid, 1324.
Thyridopteryx ephemeræformis, 427.
Cedar longicorns, 319.
Celæna renigera = Hadena renigera.
CELERY. INSECTS AFFECTING.
Buprestis divaricata = Dicerca divaricata.
Dicerca divaricata, 1063.
Tettigonid, 452.
Trochilium sp., 1063.
Celery. Leaf-hoppers on, 452.

Celtis, 2208.
Centennial insects, 1611.
  Those, 1511.
Central America. Prevalence of screw-worm in, 2158.
  Report on cotton crop and its enemies in, 2343.
Cephalomyia ovis = Œstrus ovis.
Cerambycidæ, 1324, 2267.
  Food habits of, 1902.
Cerastophorus cinctus = Chion cinctus.
Ceratina dupla, 1171.
Ceratocampa imperialis = Eacles imperialis.
  regalis = Citheronia regalis.
Ceratomia catalpæ, 2119.
  hageni, 2119.
Cercopididæ, 882.
Cercopsylla *n. g.*, 2272.
  sideroxyli *n. sp.*, 2272.
Cereals. Insects injurious to, 2238.
Ceresa bubalus, 415, 1323, 1329, 2107, 2195, 2235.
Cermatia forceps, 752, 764, 1154.
Cerococcus quercus, 2119.
Ceropales rufiventris *n. sp.*, 375, 543.
Ceroplastes cirripediformis, 2450.
  n. sp., 1964.
Ceropsylla *n. g.*, 2272.
  sideroxyli *n. sp.*, 2272.
Ceroptres ensiger, 41.
  ficus, 745.
  inermis, 41.
  petiolicola, 41.
Cerotoma caminea, 2418.
Cerura multiscripta *n. sp.*, 1411.
Cetonia, 2105.
  inda = Euphoria inda.
Chærocampa pampinatrix = Ampelophaga myron.
Chætochilus pometellus, 874.
Chætophorus, 1678.
Chætoptria hypericana, 2076.
Chafer. Melancholy, 522.
  Rose, 1329.
Chalcid egg parasites. Efficacy of, 2115.
  fly, 1643, 1959.
Chalcididæ, 128, 384, 2115, 2343.
  Joint-worm not one of the, 49.
Chalcis albifrons *n. sp.*, 6 = Smicra albifrons.
  fly, 1059.
  Inflating, 1059.
  mariæ *n. sp.*, 1112 = Spilochalcis mariæ.
  Mary, 1311.
  ovata, 2343.
Chalcophora virginiensis, 2267.
Chalepus trachypygus, 273, 1911, 1949, 1973, 2119.
Chambers, V. T. Obituary, 2218.
Change of habit, 2096.
  in vegetation caused by locusts, 1495.
Chapin's apple-leaf sewer, 1721.
Chariesterus antennator, 847.
Chauliodes. Larval characteristics of, 1652.
  pectinicornis, 712.
  rastricornis, 712.
Chauliognathus pennsylvanicus, 372, 374, 1959.
Cheese-fly and blow-fly, 1266.
  Other insects affecting, 1703.
  skipper, 1700.
Chelifer cancroides, 1884.
Chelymorpha argus, 767.
  cribraria = C. argus.
Chemical changes in the color of butterfly wings, 1936.
Chenopodium hybridum. Lixus macer bred from, 2404.
Cherished bracon, 1423.
Chernetidæ, 1884.
Cherry aphis, 960.
  borer. Flat-headed, 2267.
  Caterpillars nest on wild, 242.
  Cocoon on wild, 259.
CHERRY. INSECTS AFFECTING.
  Acarid, 1265.
  Aphis cerasi = Myzus cerasi.
  Attacus polyphemus, 1164.
    promethea, 257.
  Dicerca divaricata, 2267.
  Eriocampa cerasi, 1222.
  Hyphantria cunea, 242.
    textor = H. cunea.
  Myzus cerasi, 960, 1067, 1207, 1251.
  Œcanthus niveus, 1503.
  Scolytus rugulosus, 1940.
  Selandria cerasi = Eriocampa cerasi.
  Telea polyphemus = Attacus polyphemus.
Cherry plant-lice. Destroying, 1207.
    and their foes, 1251.
  tree borers, 1063.
    plant lice, 1067.
  trees. Minute borers in, 1940.
    Slug on pear and, 1222.
  twigs. Berry and, 1503.
Chester onion pest, 2319.
Chestnut. Gall on, 353.
  Gregarious worms on horse, 1192.
  Phylloxera sp. on, 353.
Chicken mite, 1308.
Chickweed. Geometer, 1059, 1154.
  Hæmatopis grataria on, 1059, 1154.
Chilo oryzæellus *n. sp.*, 2119, 2120.
Chilocorus bivulnerus, 38, 188, 301, 417, 730, 731, 1554, 1798, 1883.
CHINA-TREE. INSECTS AFFECTING, 1964.
  Atta fervens, 1964.
  Ceroplastes sp., 1964.
  Lecanium sp., 1964.
Chinch-bug, 584, 886, 891, 894, 1127, 1423, 1508, 1681, 2018, 2039, 2048, 2271, 2363, 2418.
  and army-worm prospects, 2087.
  Bogus, 1127, 1423.
  Bug allied to, 90.
  Bugs on grape-vines mistaken for, 398.
  Diseases of, 2143.
  False, 1329, 1423, 2291, 2418.
  in New York, 2237, 2252, 2271.
  not in seed grain, 888.
  notes, 2119, 2291.
  once more, 890, 894.
  bugs, S. A. Forbes. Experiments on, 2165.
    Genuine *vs.* bogus, 1402.
    Locusts *vs.*, 1432.
Chion cinctus, 55.
Chionaspis euronymi, 2403.

Chionapsis furfurus, 2, 188, 264, 345, 372, 373, 579, 951, 1008, 1040, 1061, 1152, 1554, 1968, 2305.
  pinifolii, 97, 1329, 2079.
  salicis, 373.
    nigræ *n. sp.*, 373 = C. salicis.
Chipman, A. J. Locust notes in 1880, 2267.
Chironomus, 167, 625.
Chlænius impunctifrons, 2340.
Chlamys plicata, 1363.
Chlorion cæruleum, 543.
Chloroneura *n. g.*, 22 = Empoasca.
  abnormis *n. sp.*, 22 = Empoasca abnormis.
  malefica *n. sp.*, 22 = Empoasca viridescens.
  maligna *n. sp.*, 22 = Empoasca obtusa.
Chloroperla brunnipennis *n. sp.*, 24.
  fumipennis, 24.
  nana *n. sp.*, 24.
Chlorops, 1461, 2060.
Chorinæus cariniger, 385.
Chortophaga viridifasciata, 1566.
Chronology of locust ravages in 1880–'81, 2267.
Chrysididæ, 375.
Chrysobothris, 934.
  femorata, 2, 6, 55, 352, 377, 379, 537, 555, 578, 634, 870, 1059, 1227, 1250, 1316, 1367, 1423, 1454, 1472, 1475, 1513, 1640, 2267.
Chrysochus auratus, 735, 790.
Chrysomela bigsbyana, 323.
  cyanea = Gastroidea cyanea
  philadelphica, 323.
  scalaris, 45.
Chrysomelidæ, 323, 2229.
Chrysopa plorabunda, 584, 1127.
  sp., 372, 533.
Cicada, 189, 213, 372, 431.
  alias the seventeen-year locust. Periodical, 1159, 1971, 1979.
  Belated individuals of the periodical, 648.
  canicularis = C. tibicen.
  cassini = Tibicen cassini.
  Fungus in, 1809.
  in Iowa. Seventeen-year, 1737.
  Little, 1242.
  in Massachusetts. Periodical, 2321.
  Note on the periodical, 2318.
  our first brood established. Periodical, 707.
  parvula = Melampsalta parvula.
  Periodical, 474, 527, 619, 1059, 1159, 1489, 1624, 1836, 2014, 2216, 2312, 2314, 2315, 2318, 2320, 2363.
  Premature appearance of the periodical, 2320, 2326.
  pruinosa = C. tibicen.
  in savin-twigs. Eggs of the periodical, 698.
  septendecim = Tibicen septendecim.
    Influence of climate on 2329.
    Instinct of, 2144.
    Some popular fallacies regarding, 2367.
  Seventeen-year, 1034, 1093, 1698, 2312, 2314.
Cicada. Song notes of the periodical, 2334.
  in southeastern Indiana, Butler, A. W. The periodical, 2304.
    Massachusetts. Periodical, 2216.
  Sting of the, 371, 372, 407.
  tibicen, 920, 1034, 1546.
  tredecim = Tibicen tredecim.
  Twigs punctured by periodical, 1055.
  years, 51.
Cicadas, 26, 2311.
  Cotton-worms and, 1997.
  Destroying, 2305.
  and walking-sticks, 920.
Cicadidæ, 431.
Cicadula exitiosa, 1766.
Cicindela repanda, 1763.
  6-guttata, 347.
  vulgaris, 628.
Cicindelidæ, 719.
Cimbex americana, 699, 1380, 1514, 2291, 2333, 2418.
  laportei = C. americana.
Cioidæ, 1937.
Circotettix maculatus *n. sp.*, 1959.
Circular No. 1, United States Entomological Commission, 1575.
  2, United States Entomological Commission, 1576.
  9, U. S. Dept. Agric., Div. Ent., 2303.
Cirrhophanus triangulifer, 2189.
Cirrospilus esurus *n. sp.*, 1712 = Tetrastichus esurus.
  flavicinctus *n. sp.*, in Lintner's first report. (See foot-note 1, p. 379.)
Cis fuscipes, 1737.
Citheronia regalis, 425, 629, 702, 775, 803, 860, 1087, 1275.
Clemens, B. Obituary, 223.
Cleonus *sp.*, 1755.
Cleora. Evergreen, 2363.
Cleridæ, 1363.
Clerus nigripes = C. 4-guttatus.
  4-guttatus, 200.
Click-beetle larvæ, 1643.
  beetles, 84, 351, 1625.
Climate on Cicada septendecim. The influence of 2329.
  for Doryphora, 1412.
  on prolongation of life of insects. Effects of, 1129.
Climbing cut-worms, 1059.
Clisiocampa americana, 66, 77, 112, 240, 277, 336, 350, 363, 642, 819, 1181, 1301, 1352, 2238.
  disstria, 240, 291, 328, 363, 645, 646, 688, 1127, 1181, 1200, 1301, 1331.
  sylvatica = C. disstria.
Cloantha derupta, 2410.
Cloe dubia *n. sp.*, 24.
  ferruginea *n. sp.*, 24.
  fluctuans *n. sp.*, 24.
  mendax *n. sp.*, 24.
Close of the first volume, 701.
Clostera americana = Ichthyura inclusa.
Clothes moths, 70, 1633.
  observed in the United States, 2146.

Clover. Army-worm notes and inquiries, its work on, 1877.
beetle. Flavescent, 2394.
Bumble-bees *vs.* red, 2376.
enemy. New imported, 2028.
hay-worm, 1363.
Army-worm *vs.*, 2090.
CLOVER. INSECTS AFFECTING, 1690, 2050.
Asopia costalis, 83, 675, 948, 1132, 1363, 2090.
Cecidomyia leguminicola, 1690, 1721, 2238.
Drasteria erechtea, 1459.
Hylesinus trifolii, 1690, 1721, 1777, 1846.
Leucania unipuncta, 1877.
Oscinis sp., 2394,
Phytonomus punctatus, 2010, 2028, 2061, 2119.
Pyralis olinalis = Asopia costalis.
Sitones flavescens, 2394.
Clover-leaf beetle, 2119.
weevil. Further notes on, 2061.
New imported enemy to, 2010.
root borer, 1721, 1846, 2512.
seed midge, 1721, 2238, 2291.
stem maggot, 2394.
Webster, F. M. Insects affecting white, 2394.
weevil, 1777.
worms, 83, 675, 948, 1132.
Clubbed tortoise beetle, 1127, 1558.
Larva of, 1238.
Cluster flies. Notes on, 2174.
fly, 2128.
Clydonopteron *n. g.*, 1929.
tecomæ *n. sp.*, 1929.
Clytus capræa = Neoclytus capræa.
Oak, 2267.
pictus = Cyllene pictus.
robiniæ = Cyllene robiniæ.
speciosus = Plagionotus speciosus.
Coccid mistaken for a gall, 1972.
Coccidæ, 1329, 1883, 1968, 2088, 2137, 2235, 2520.
Means against, 104, 218, 264, 301, 487, 508, 944, 2372, 2373, 2403.
Monograph of, 1828.
Coccinella munda = C. sanguinea.
sanguinea, 6.
Coccinellidæ, 69, 322, 323, 639, 824, 1883, 1956, 2119.
to birds. Relations of Carabidæ and, 2152.
Food relations of Carabidæ and, 2151.
Habits of, 125.
Coccotorus scutellaris, 33, 34, 42, 254, 373, 377, 1301, 1378.
Coccus, 159.
harrisii = Chionaspis furfurus.
Cochylis hilarana, 1059.
Cocklebur. Rhodobænus 13-punctatus on, 1301.
Sphenophorus, 1301.
Cockroach eggs, 573.
Cockroaches. Means against, 1197.
Cockscomb elm gall, 1384.
Codling moth, 57, 307, 373, 1022, 1059, 1127, 1254, 1329, 1334, 1363, 1476, 1677, 2119, 2293, 2418.
again, 1301, 1311.
heresies, 1398.
Codling moth, jarring down infested fruit, 1318.
Michigan apples and, 1677.
Wier's trap, 1334.
Cœliodes inæqualis = Craponius inæqualis.
Cœlodasys unicornis, 749, 880, 1280.
Coffee-borer, 498.
Cohn, F. The Hessian fly in Silesia in 1869, 2267.
Colaspis, 372.
barbara, 1301.
flavida, 129, 133, 135, 231, 993, 1301, 1311, 1904.
Grape-vine, 231, 1301.
Cold applied to chrysalids of butterflies. Effects of, 1778.
on Curculio. Influence of extreme, 1335.
and hibernating apple-worms. Severe, 2037.
on insects. Effects of severe, 1818.
the scale insects of the orange in Florida.
Voyle, J. Effects of, 2277.
Coleophora. Apple, 1721.
malivorella *n. sp.*, 1721.
Coleoptera, 1329, 1904, 2267.
Classification of North American, 2085.
Myrmicophilous, 2105.
of North America. The new classification of, 2175.
Parasitic, 2353.
Willow-galls made by, 46.
Coleopterorum. Catalogus, 1866.
Coleopterous cave fauna of Kentucky, 2033.
larvæ. Remarkable, 40.
Colias. The genus, 2259.
philodice, 461.
Collecting and preserving insects, 881, 1057.
Colonies. Silk-culture in the, 2278.
Colopha ulmicola, 27, 137, 151, 518, 1384, 1678.
Colorado beetle poisonous? Is the, 1405.
cabbage flea-beetle, 2291.
grasshopper, 502.
potato-beetle, 21, 991, 1059, 1311, 1329, 1363, 1423, 1482, 1558, 1570, 2291, 2294, 2418.
abroad, 1364, 1407, 1431.
again, 1301.
Bogus, 1558.
in Europe, 1597.
Experience with the, 1518.
Inquiries concerning the, 1491.
Insect enemies of the, 411.
Mite parasite of the, 1505.
Native home of the, 1462.
in New Hampshire, 1859.
New York, 1379.
Onward march of the, 1218.
poisonous? Is the, 1483.
Poisonous qualities of the, 1425.
Specific for, 1490.
potato-bug, 293, 334, 366.
Bogus, 519.

Colorado potato-bug. Poisonous qualities of the, 1101.
bugs. To destroy, 650.
Coloration in insects. Unity of, 50.
Come. Still they, 908.
Common Curculio and its allies, 254.
flesh-fly, 1423, 1570, 1625, 1643.
longicorn pine-borer, 2291.
May beetle. Eggs of, 1329.
Commoner insects. Notes on our, 1802.
Companion wheat-fly, 2394.
Complimentary, 504.
Compositæ. Antistrophus confined to the, 1131.
Compsomyia macellaria, 2256.
Comstock on the classification of insects, 2390.
Diaspinæ, 2227.
J. H. Report on miscellaneous insects, 2119.
Conchylis erigeronana *n. sp.*, 1968.
œnotherana *n. sp.*, 1968.
Conclusions. Jumping at, 253.
Cone-nose. Blood-sucking, 795, 854.
Confessing the corn, 256.
Confounding friend with foe, 1378.
Conocephalus, 2267.
Conorhinus. Blood-sucking, 2291.
sanguisugus, 497, 795, 854.
Conotrachelus, 934.
anaglypticus, 372.
cratægi *n. sp.*, 35, 358, 1301, 1358.
geminatus, 34.
nenuphar, 6, 33, 42, 50, 98, 188, 237, 254, 290, 329, 367, 372, 373, 377, 387, 439, 487, 501, 566, 589, 620, 649, 680, 703, 873, 930, 958, 978, 1056, 1059, 1062, 1069, 1071, 1129, 1135, 1173, 1177, 1201, 1214, 1258, 1301, 1325, 1357, 1358, 1372, 1477, 1685, 2230, 2296.
puncticollis *n. sp.*, 34 = C. geminatus.
Controlling sex in butterflies, 1352.
Convolulaceæ, Insects, 1238.
Cook on insecticides. Review of, 2501.
Cooke's injurious insects of the orchard. Review of, 2245.
Copidryas gloveri, 2486.
Copper underwing. Spattered, 1301.
Copris carolina, 416.
Coptocycla, 1238.
aurichalcea, 681, 736, 802, 1127, 1510.
bivittata = Cassida bivittata.
clavata, 693, 742, 767, 1238, 1558.
guttata, 1127, 1510.
nigripes = Cassida nigripes.
Coquillett, D. W. Remedies for cottony cushion-scale, 2394.
Report on the gas treatment for scale insects, 2418.
locusts of the San Joaquin Valley, California, 2363.
production and manufacture of buhach, 2364.
Cordulia? molesta *n. sp.*, 39.
Cordyceps, 332, 478.
ravenelii, 594, 640.
Coreus tristis = Anasa tristis.
Corimelæna pulicaria, 354, 637, 741, 1046.
Corn bill-bug, 2119, 2291, 2418.
borer, 754.
Confessing the, 256.
Curculio, 1042.
cut-worm, 1059.
ear-worm, 2238.
feeding Syrphus-fly, 2422.
fields. Beetles in, 2317.
CORN. INSECTS AFFECTING, 2119.
Agonoderus pallipes, 2317.
Anthomyia zeas, 657, 1059, 1066.
Aphis maidis, 23.
Butalis cerealella, 1232.
Calandra granaria, 1683.
oryzæ, 1683.
Cetonia inda = Euphoria inda.
Cut-worm, 1073.
Diabrotica longicornis, 1905, 2187.
Empretia stimulea, 754.
Euphoria inda, 1655.
Gortyna nitela, 754.
sp., 138.
Hadena sp., 1047.
Heliothis armigera, 192, 1301, 1664, 2119, 2238.
Ips fasciatus, 4.
4-signatus = I. fasciatus.
Lepidopteron, 162.
Mesograpta polita, 2422.
Noctuid, 181.
Pempelia lignosella, 2119.
Sphenophori, 2030.
Sphenophorus robustus, 2119.
sculptilis, 337, 1042, 1301.
zeas = S. sculptilis.
Corn insects. Potato and, 138.
Larval habits of Sphenophori that attack, 2030.
A new enemy to, 1905.
foe of the, 337.
insect foe of green, 1655.
pest. Unknown, 1073.
plant louse, 2418.
root Diabrotica, 2187.
louse, a new enemy to the corn, 23.
rustic, 1059.
Serious injury to stored and cribbed, 1683.
Sphenophorus, 1301.
stalk borer. Smaller, 2119.
Webster, F. M. Insects affecting, 2418.
worm, 192, 820, 1301.
Worm in 181.
worms, 162, 1047, 1664, 2119.
The war on, 1522.
Corrected. A few errors, 977.
Correction, 939.
Entomological, 1328.
Phylloxera, 1355.
Corrodentia, 2267.
Corticaria pumila, 2418.
Corycia vestaliata, 744.

Corydalus cornutus, 130, 308, 473, 1329, 1570, 1584, 1627, 1652.
Larval characters of, 1652.
Corynetes rufipes = Necrobia rufipes.
Corythuca ciliata, 200, 400.
Coscinoptera dominica, 1363, 2093.
Cossidæ, Bailey, J. S. The tree borers of the family, 2253.
Cossus robiniæ, 37, 245, 967, 1003, 1121.
Cotalpa lanigera, 40.
Cotton belt. Smith, E. A., 2343.
boll-worm, 2238.
bolls. Euryomia melancholica *vs.*, 2451.
in Brazil, Branner, J. C. Insects injurious to, 2277.
caterpillar, 1353, 1801.
caterpillars in Brazil, Branner, J. C., 2343.
convention. Address at Atlanta, 2038.
crop and its enemies in Mexico, Central and South America, and the West Indies. Report on the, 2343.
culture and the insects affecting the plant at Bahia, Brazil, 1788*a*.
destroyers, 1886.
field mistaken for those of the cotton-worm. Chrysalids dug up in, 1790.
insects, 636.
COTTON. INSECTS AFFECTING.
Aletia argillacea = A. xylina.
xylina, 646, 1127, 1338, 1353, 1363, 1369, 1649, 1657, 1702, 1719, 1721, 1722, 1736, 1758, 1769, 1814, 1845, 1852, 1882, 1886, 1997, 2038, 2064, 2067, 2119, 2130, 2155, 2164, 2295, 2343.
Anomis xylina = Aletia xylina.
Euphoria melancholica, 2451.
Euryomia melancholica = Euphoria melancholica.
Gryllus sp., 2384.
Heliothis armigera, 646, 1353, 2238, 2343
Hyperchiria io, 2343.
Saturnia io = Hyperchiria io.
Spilosoma acræa, 2343.
Theclapœas ? 1872.
Cotton insects, Jones, R. W. Report on, 2343.
W. J. Report on, 2343.
Kerosene as a means against, 2164.
moth. Habits of, 1758.
Hibernation, 1728.
plant. Insects affecting, 1721.
planters. Suggestions to, 1832.
Plums and, 1477.
seeds in hot-beds. Sowing, 1772.
squares. Butterfly larvæ injurious to, 1872.
Cottonwood borers, 1525.
dagger, 1127.
A foe to, 1834.
COTTONWOOD. INSECTS AFFECTING.
Acronycta lepusculina, 1127.
Aphid, 495.
Drasteria erechtea, 1459.
Lina scripta, 1654, 1834, 2291.
Pemphigus populicaulis, 446, 713.
COTTONWOOD. INSECTS AFFECTING—Continued.
Pemphigus vagabundus, 446.
Plectrodera scalator, 1525.
Saperda calcarata, 71.
Cottonwood killer, 1654.
leaf beetle. Streaked, 2291,
galls, 713.
Unsightly galls on, 446.
Worms on, 1459.
Cotton-worm, 1127, 1363, 1649, 1702, 1719, 2077, 2119, 2130, 2164, 2295.
articles in the News, 1719.
Barnard, W. S. Tests of machinery for destroying, 2253.
Bulletin on the, 1736.
Chrysalids dug up in corn-fields mistaken for those of the, 1790.
damage in 1881, 2119.
To destroy the, 1338.
destroyer. Best, 1882.
Early appearance of, 184.
Facts about, 1657.
How to manage the, 1831.
use Paris green for the, 1544.
injury in regions overflowed by Mississippi. Protection from, 2119.
investigation, 1833.
Jones, R. W. Observations and experiments on, 2164.
moth hibernation, 1953.
Not the, 1773.
notes from Vera Cruz, Mexico. Interesting, 1845.
Orange insects and, 2067.
parasites, 1712.
Parasites bred from, 1722.
Poisoning devices for the, 2119.
Possible food-plants for, 2064, 2119, 2155.
in prairie belt. First appearance of, 1852.
question of hibernation settled, 2119.
A remedy for the, 1369.
Report on, 2164.
in south Texas in 1883. Anderson, E. H., 2253.
Sowing cotton-seeds in hot-beds as a means against the, 1772.
in the United States, 1769.
Cotton-worms, 2291.
and Cicadas, 1997.
Cottony cushion-scale, 2394, 2418.
Coquillett, D. W. Remedies for, 2394.
Koebele, A. Remedies for, 2394.
maple-scale, 1816, 2291.
scale insect on maples, 1515.
Couper's thorn-leaf gall. Mr., 376.
Crab-apple borers, 602.
Crack-jaw names, 592.
Crambus. Vagabond, 2119.
vulgivagellus, 1990, 2029, 2119.
Cranberry fruit worm, 2291, 2349.
galls, 194.

CRANBERRY. INSECTS AFFECTING.
Acrobasis vaccinii, 2291.
Cecidomyia sp., 194.
Phytopus sp., 2493.
Cranberry leaf-folder, 2291.
Smith, J. B. Report on insects affecting the hop and the, 2277, 2291.
Crane-flies, 1278.
fly larva, 512.
Craponius inæqualis, 367, 373, 1059.
Cratægus. Insects on, 376.
Cratonychus incertus = Melanotus incertus.
Cratypedes putnami, 1959.
Cremastochilus, 2105.
Creophilus villosus, 805.
Crepidodera brevis, 1782.
cucumeris, 357, 401, 1056, 1059, 1558, 1782.
Distribution of species of, 1782.
helxines, 358.
parvula, 1782.
Crescent. The little Turk and his, 329.
Cribbed corn. Serious injury to, 1683.
Cricket. Grapes cut by a tree, 414.
in Louisiana. Destructive, 2384.
in raspberry canes. Eggs of tree, 2195.
Tree, 251, 953, 961, 999.
Snowy tree, 2291.
Western, 1959, 2267.
Bruner, L. Report on, 2267.
Histology of, 1959.
Crickets, 143, 1363.
Mole, 1270.
Crioceris asparagi, 524, 2135.
12-punctata, 2135.
Crippled moths, 729.
Critic criticised, 222, 942.
Criticism. Friendly, 1307.
Crop gall-gnat, Wagner, B. Observations on the new, 2267.
Croton-bug as a library pest, 1717.
Cruel bug-hunters, 440.
Crumpler. Apple-leaf, 949.
in Georgia. Rascal, 1962.
mistaken for Curculio. Apple-leaf 1069.
Rascal leaf, 311, 373, 1311, 1580
Cryptocentrus *n. g.*, 385 = Mesoleius.
Cryptorhopalum, 1746.
Cryptus albicaligatus *n. sp.*, 385.
albisoleatus *n. sp.*, 385.
annulicornis = Pimpla annulicornis.
cecropia, 1311.
cinctipes *n. sp.*, 385.
conquisitor = Pimpla conquisitor.
inquisitor = Pimpla inquisitor.
junceus = Linoceras junceus.
nigricalceatus *n. sp.*, 385.
nuncius, 1112.
picticoxus, 385.
pleurivinctus = Pimpla conquisitor.
rhomboidalis *n. sp.*, 385.
rufifrons *n. sp.*, 385.
samiæ, 2343.
Ctenisous albilineatus *n. sp.*, 385.
ornatus, 385.
Ctenucha latreilliana = C. virginica.
virginica, 1241.
Cucumber beetle Striped, 773, 1127, 2238.
bug. Striped, 148.
flea-beetle, 1059, 1558.
CUCUMBER. INSECTS AFFECTING.
Diabrotica vittata, 148, 773.
Eudioptis nitidalis, 808, 843.
Phakellura nitidalis = Eudioptis nitidalis.
Cucumber. Worm boring in, 808, 843.
Cucurbitaceous vines. Insects affecting, 1127.
Culex, 625.
mosquito, 2185.
pipiens, 2071.
Culicidæ, 603, 2162.
Cupuliferæ. Cynips confined to, 1131.
Curculio, 958, 978, 1062, 1080, 1127.
again. Comparative scarcity of the, 703.
and its allies. Common, 254.
Apple, 1176, 1301.
leaf crumpler mistaken for the, 1069.
snout-beetle or four-humped, 1088.
and bark-lice, 487.
breeds in apple. Plum, 1214.
Carabidæ feeding on, 372.
catcher, 875.
Hull's, 372, 651, 875.
Corn, 1042.
extermination possible. Great discovery, 1173.
Fighting the, 237.
Flea-beetles and, 873.
flies by night. How the, 706.
Four-humped, 1088.
Gas-waste *vs.*, 549.
go underground to transform? Does the apple, 1228.
humbug. Another new, 589.
A new, 680.
Influence of extreme cold on the, 1335.
injurious to grape, 267.
Means against the, 290.
natural history and how to catch him. Plum, 1372.
parasite. Porizon, 1301.
Sigalphus, 1301.
Parasites of the plum, 1751, 1795.
Paris green for the, 1258.
Plum, 1059, 1129, 1301, 2296.
To protect plums from the, 1071.
Quince, 1301.
remedies, 566.
remedy. The new, 1177.
Ransom, 1201.
scarcer than last year, 620.
Is the, 649.
trap. Smith's patent, 969.
Use of the word, 1069.
Curculionidæ. Monograph of, 1828.
Curculios on pears, 1358.
Currant borers, 481.
bush borer, 974.

Currant, Currant-worms and black, 1079.
  Four-lined leaf-bug on, 715.
  and gooseberry worms, 1570.
CURRANT. INSECTS AFFECTING.
  Ægeria tipuliformis, 340, 481, 974, 2238.
  Alcathœ caudatum, 481.
  Amblycorypha oblongifolia, 1157.
  Aphis ribis = Myzus ribis.
  Capsus 4-vittatus = Pœcilocapsus lineatus.
  Ellopia ribearia = Eufitchia ribearia.
  Eufitchia ribearia, 176, 364, 772, 877, 1224.
  Mytilaspis pomicorticis = M. pomorum.
    pomorum, 973.
  Myzus ribis, 304.
  Nematus ribesii, 78, 340, 364, 380, 381, 772, 1031, 1224, 1570, 1696, 2238.
    ribis = N. ribesii.
    ventricosus = N. ribesii.
  Phylloptera oblongifolia = Amblycorypha oblongifolia.
  Pœcilocapsus lineatus, 715.
  Pristiphora grossulariæ, 176, 364, 772, 1570, 2238.
  Prosopis affinis, 1171.
  Psenocerus supernotatus, 481.
  Silvanus surinamensis, 1260.
  Tenthredinid, 136.
  Trochilium tipuliformis = Ægeria tipuliformis.
    caudatum = Alcathœ caudatum.
Currant plant-lice, 304.
    louse, 322.
  stalk-borer, 2238.
  worm, 877, 1204.
    Imported, 1127, 1570, 2238.
    Native, 1570, 2238.
    Pear-slug and, 1031.
  worms, 364, 882, 1696.
    Destructive, 78.
    Gooseberry and, 772.
Currants. Beetle in dried English, 1260.
  Green worms on gooseberries and, 136.
Cushion-scale. Cottony, 2394, 2418.
    Coquillett, D. W. Remedies for, 2394.
    Koebele, A. Remedies for, 2394.
Cushions. Ravages of moths in, 1731.
Cussed red-leg, 1598.
Cuterebra buccata, 526.
Cut-worm, 868, 992.
  Climbing, 1059.
  Corn, 1059.
  Dark-sided, 281, 1059, 2291, 2363.
  Dingy, 1059.
  eggs, 1095.
  Glassy, 1059, 2291, 2394.
  Granulated, 2291.
  Greasy, 1059, 2291, 2418.
  lion, 1059, 1314.
  moth. Eggs of, 607.
  Shagreened, 2291.
  Small white bristly, 1059.
  Speckled, 1059, 2291.
Cut-worm. Variegated, 1059, 2291.
  W-marked, 1059, 2291.
  Western striped, 1059.
  Wheat, 1059.
  Yellow-headed, 1059.
Cut-worms, 3, 85, 321, 658, 914, 1059, 1315, 2238, 2291.
  Cabbage, 2291.
  A chapter on, 964.
  Climbing, 321, 359.
  destroying recently sown wheat, 455.
  Means against, 226, 312, 1059, 2387.
  Novel facts about, 901.
  originate? How, 787.
  and other insects? Can land be insured against, 801.
  parasites, 349.
  Remedy for cabbage, 2291.
  Ridding the ground of, 2310.
  severing cabbage-plants, 626.
  Smilax injured by, 1941.
  from the stomach of a robin, 1873.
  Tree, 228, 281.
Cybister fimbriolatus, 750, 816.
Cybocephalus californicus, 2079.
    Habits of, 2079.
    nigritulus, 2079.
Cyclocephala immaculata, 1236.
Cyclone nozzle, 2327.
Cylindrical Orthosoma, 1059.
Cyllene, 560.
  decorus, 50.
  pictus, 45, 50, 55, 89, 269, 308, 560, 828, 941, 1516.
  robiniæ, 37, 45, 50, 55, 141. 308, 472, 560, 828, 921, 941, 967, 1196, 1250, 1288, 1516.
Cynipid gall on oak twigs, 1822.
Cynipidæ, 518, 799, 821, 2072, 2343.
  Dimorphism in, 41, 1980.
  Illinois, 41.
  Important work on, 2125.
  List of, 41.
  New classification, 41.
  Synoptic table of genera, 821.
Cynips, 1131, 1559.
  aciculata = Amphibolips spongifica.
  bicolor = Rhodites bicolor.
  confined to Cupuliferæ, 1131.
  Dimorphism in, 41.
  fecundatrix, 1606.
  gallæ-tinctoriæ, 1560.
  n. sp., 1822.
  q.-californica = Andricus q.-californica.
  q.-decidua, 1925.
  q.-erinacei *n. sp.*, 41 = Acraspis q.-erinacei.
  q.-flocci *n. sp.*, 41 = Andricus q.-flocci.
  q.-forticornis *n. sp.*, 41 = Biorhiza forticornis.
  q.-frondosa, 821, 774, 1666.
  q.-glandulus *n. sp.*, 1606.
  q.-inanis = Amphibolips q.-inanis.
  q.-mamma *n. sp.*, 518 = Holcaspis mamma.
  q.-mellaria *n. sp.*, 1942.
  q.-operator = Andricus operator.
  q.-operatola, 1352.

Cynips, q. pilulæ *n. sp.*, 41 = Cecidomyia q.-pilulæ.
q.-podagræ *n. sp.*, 41 = Andricus q.-podagræ.
q.-prunus *n. sp.*, 518 = Amphibolips q.-prunus.
q.-punctata = Andricus q.-punctata.
q.-saltatorius = Neurcterus q.-saltatorius.
q.-spongifica = Amphibilops q.-spongifica.
seminator = Andricus seminator.
sp., 799.
terminalis, 1448.
Cynthia atalanta = Pyrameis atalanta.
cardui = Pyrameis cardui.
Cypress. Cecidomyia cupressi-ananassa on, 1180.
galls, 1180.
Cyrtoneura a parasite or a scavenger? Is, 2102.
stabulans, 2102, 2343.
Cytoleichus sarcoptoides, 2135, 2157.
Cytophyllus concavus, 516, 569, 1005, 1157, 1363, 2276.
Dactylosphæra caryæ-semen *n. sp.*, 373 = Phylloxera caryæ-semen.
vitifoliæ = Phylloxera vastatrix.
Dactylosphæridæ, 1301.
Dagger. Cottonwood, 1127.
Smeared, 1301.
Dahlia and aster stalk-borer, 940.
Gortyna nitela injuring, 862, 940, 1009.
stalk-borer, 862, 1009.
Daisy as an insecticide. Ox-eye, 1861.
Dakota. Locust flights in, 2007.
Dakruma convolutella, 1059.
Dana, J. D. Criticism of the entomological views of, 44.
and his entomological speculations. Professor, 82.
Danaidæ, 613, 1301.
Danais archippus, 406, 461, 613, 1235, 1301, 1340, 1535, 1622, 1635, 1711, 1756, 1770, 2052.
Dangerous looking, 814.
Dapsilia rutilana, 1713, 1721.
Darapsa myron = Ampelophaga myron.
Dardanelles. Sarcophaga lineata destructive to locusts in, 2075.
Dark grape-worm, 763.
sided cut-worm, 1059, 2291, 2363.
Darning-needle. Devil's, 1709.
Darwin's work in entomology, 2129.
Dascyllid in stomach of black bass, 1792.
Dasyllis thoracica, 1226.
Datana contracta, 50.
ministra, 50, 132, 151, 165, 467, 922, 1045, 1229, 2222, 2333.
Decatoma dubia *n. sp.*, 384 = var. of varians.
excrucians *n. sp.*, 384 = var. of nigriceps.
hyalipennis *n. sp.*, 384.
nigriceps *n. sp.*, 384.
nubilistigma *n. sp.*, 384.
simplicistigma *n. sp.*, 384.
sp., 536.
varians *n. sp.*, 384.
Defense. Inexpert, 2476.
Delicate long-sting, 1329.
Deloyala = Coptocycla.
clavata = Coptocycla clavata.
Deltocephalus xanthoneurus, 2116.
Delusion. A popular, 525.
Dendrotettix *n. g.*, 2410.
quercus *n. sp.*, 2410.
Deræocoris rapidus = Calocoris rapidus.
Dermanyssus avium, 1308.
gallinæ, 1308.
Dermatobia hominis, 497.
Dermatoptera, 2267.
Dermestes lardarius, 72, 726, 1190, 1240, 1703.
Toothed, 2363.
vulpinus, 2363.
Dermestidæ, 1746, 2133, 2180.
Means against, 56, 246, 462.
Deserved honor, 2124.
Desmia maculalis, 468, 993, 1056, 1158, 1301, 1569, 1579.
Desmocerus palliatus, 358.
Destructive larvæ, 722.
locusts. Literature of, 1959.
Devastating locust, 2363.
Devil's darning-needle, 1709.
riding-horse, 457, 1059.
Dexia rustica, 2260.
Dexidæ. Larval habits of, 2260.
Diabrotica. Corn-root, 2187.
12-punctata, 123, 687, 2418.
Long-horned, 1905.
longicornis, 169, 1905, 2187.
Twelve-spotted, 687, 1127, 2418.
vittata, 123, 148, 175, 355, 772, 897, 2236, 2238, 2260.
Diapheromera, 2267.
femorata, 144, 448, 920, 1111, 1395, 1701, 1709, 1721, 2276.
velii *n. sp.*, 45.
Diaspinæ. Comstock on the, 2227.
Diaspis harrisii = Chionaspis furfurus.
rosæ, 1303.
Diastrophus, 318, 1131.
cuscutæformis, 609.
nebulosus, 263, 610, 1131.
Dicerca divaricata, 871, 1063, 2267.
Didictyum *n. g.*, 1749 = Hexaplasta.
zigzag *n. sp.* = Hexaplssta zigzag.
Diedrocephala flavipes *n. sp.*, 1766, 1767, 2363.
Differential locust, 1423, 2363.
Digger wasps, 309, 1643, 1959.
Dilar in North America, 2023.
Dilophus, 2076.
Diminished Pezomachus, 1127.
Dimmock's inaugural dissertation, 2082.
Dimorphic asexual females. Lichtenstein's theory as to, 2072.
Dimorphism in Cynipidæ, 1980.
Cynips, 41.
Dytiscidæ, 28.
locusts, 1889.
Dingy cut-worm, 1059.
Dinoderus pusillus, 2104.
as a museum pest, 2104.
Dionea, 1499, 1688.
Diphryx prolatella, 2120.
Diplax rubicundula, 2007.
Diplodus luridus, 372.
Diplosis annulipes *n. sp.*, 46.

Diplosis atricornis *n. sp.*, 46.
atrocularis *n. sp.*, 46.
decem-maculata *n. sp.*, 46.
found in phylloxera galls, 1901.
grassator, 2150.
helianthi-bulla *n. sp.*, 197.
nigra, 2363, 2393.
Pear, 2363.
pyrivora *n. sp.*, 2393.
septem-maculata *n. sp.*, 46.
tritici, 109, 110, 142, 216, 280, 292, 372, 428, 711, 1512, 1690, 1721, 2238.
Diplotaxis not a vesicant, 1796.
sordida, 1926.
Diptera, 1329, 1736, 2267.
Parasitic, 2076.
Preparation of, 2041.
Swarming of, 2128, 2174.
Willow-galls made by, 46.
Dipterous enemies of the honey-bee, 704.
Phylloxera vastatrix, 2150.
galls of the willow, 46.
larva on swallow, 153.
larvæ in human body, 2256.
Remarkable, 40.
Discontinuance of publication [of Am. Ent.], 2106.
Disease. Infesting Phylloxera with fungus, 1808.
Diseases of beneficial insects. Fungus, 1813.
chinch-bug, 2143.
Disippus butterfly, 1301.
Pupa of, 1193.
Microgaster, 1301.
Disonycha alternata, 45.
flaviventris, 1506.
Dissosteria carolina, 667.
Ditching for young locusts, 1488.
Dobson, 780.
Dock. Galls on supposed, 1165.
DOCK. INSECTS AFFECTING.
Gastroidea cyanea, 1165.
Gastrophysa cyanea = Gastroidea cyanea.
Doctoring fruit-trees again, 230.
Doctors differ, 98.
Dog-day harvest-fly, 1546.
Dolerus arvensis, 358.
unicolor, 1989.
Dollars. That hundred and fifty million, 1647.
Domesticated katydids, 1536.
Dominican case-bearer, 1363.
Dorthesia celastri, 1988.
characias, 1686, 1730.
Covering of egg-puncture mistaken for, 1988.
viburni, 1988.
Doryphora, 1639.
Climate for, 1412.
10-lineata, 21, 32, 48, 50, 88, 94, 119, 171, 275, 276, 293, 313, 334, 347, 365, 401, 411, 565, 650, 708, 709, 760, 866, 905, 908, 919, 925, 946, 968, 977, 983, 991, 995, 1019, 1027, 1044, 1056, 1059, 1068, 1096, 1101, 1218, 1301, 1311, 1325, 1329, 1363, 1364, 1379, 1391, 1405, 1407,
Doryphora, 10-lineata, 1412, 1423, 1425, 1431, 1447, 1450, 1462, 1469, 1480, 1482, 1490, 1491, 1505, 1519, 1524, 1528, 1558, 1564, 1570, 1593, 1597, 1610, 1639, 1672, 1714, 1859, 1948, 1993, 2081, 2235, 2291, 2294.
Fire cure for, 121.
juncta, 48, 50, 372, 401, 519, 1056, 1059, 1431, 1450, 1558, 1672, 2096, 2215.
Dotted-legged plant bug 1311.
Double cocoons. The shedding of tracheæ, 1715.
Dragon-flies, 1707.
Dragon-fly. Large, 759.
Drasteria erechtea, 631, 1459, 2343.
Drasterius amabilis, 1798, 1905.
dorsalis, 2418.
Drepanosiphum, 1678.
Dried leaves as food for lepidopterous larvæ, 2159.
Driving nails into fruit-trees, 87.
potato-beetles, 1044.
Drones to death? Do worker bees sting, 1145.
Drop of gold, 775.
worm, 1059, 1090, 1650.
Drosera, 1499, 1688.
Drosophila amœna, 2119.
ampelophila, 2119.
nigricornis, 1607.
sp., 1607.
Drought. Connection of locust invasion with the occurrence of, 1422.
on Hessian-fly. Effects of, 2031.
Insects and, 2100.
Drug-store pests, 510, 551.
Dryobius sexfasciatus, 583.
Dryocampa, 1352.
bicolor = Sphingicampa bicolor.
pellucida = D. virginiensis.
rubicunda, 244, 841, 915, 1329, 1352, 1357, 2490.
senatoria, 151, 783.
stigma, 488.
virginiensis, 488.
Dutchman's pipe. Papilio philenor on, 1321, 1774.
Worms on, 1321.
Dynastes tityrus, 580, 1216, 1292.
Dysdercus suturellus, 2343.
Dytiscid in stomach of black bass, 1792.
Dytiscidæ. Dimorphic, 28.
Dytiscus. Mode of feeding of the larva of, 2065.
Eacles imperialis, 1087, 1268.
Earthquake commotion and locust multiplication and migration, Swinton, A. H., 2267.
Eastern States. Supposed army-worm in New York and, 1990.
Eburia 4-geminata, 1014.
Eccopsis ferrugineana, 1968.
Hickory, 2363.
monetiferana, 1968.
permundana, 2324.
Variegated, 2363.
Echthrus annulicornis *n. sp.*, 385.
Economic entomology, 1357, 1362.
in California. Interest in, 2053.

Economic entomology in England, 1983.
Fostering the study of, 2142.
Importance of, 2238.
Iowa, 2197.
Recent advances in, 2281.
investigations in the South and West, 1864.
notes, 2220, 2248.
Ecpantheria scribonaria, 1140, 1153, 1311, 1802.
Ectobia germanica, 573, 1717, 2276.
Edema albifrons, 422, 913.
Edinburgh International Forestry Exhibit. Report of, 2342.
Edwards' butterflies of North America (Review), 395, 479, 623, 827.
Egg-feeding mites, 1637.
parasite. Anthomyia, 1570, 1625, 1643.
parasites of Acrididæ, 2355.
Efficacy of chalcid, 2115.
plant. Enemies of, 2096, 2215.
EGG-PLANT. INSECTS AFFECTING.
Cassida texana, 2096, 2215, 2235.
Doryphora 10-lineata, 21.
juncta, 2096, 2215, 2235.
Egg puncture mistaken for Dorthesia. Covering of, 1988.
punctures in raspberry and grape-vines, 2195.
sack of some unknown spider, 1144.
slits made by Homoptera, 79.
Eggs in or on canes or twigs, 1329.
Experiments with locust, 1572.
growth of insect, 2241.
hatch? Will unimpregnated, 1029.
in maple twigs. Rows of, 665.
Mass of, 65, 240.
of moth, 611.
but parasitic cocoons. Not, 1290.
in peach twigs, 554.
pear twigs. Rows of, 577.
on sugar-maple, 350.
in sumach, 18.
Egypt. Bug-hunter in, 372.
Eight-spotted forester, 343, 1059, 1127, 1363.
Eighth Report State Entomologist of Missonri, 1482.
Einige unserer schädlicherer Insekten, 1325.
Elachistus enplectri, 2343.
Elaphidion parallelum = E. villosum.
putator = E. villosum.
tectum, 1602.
villosum, 288, 793, 839, 1556, 2267.
Elateridæ, 3, 224, 430, 740, 846, 892, 932, 1030, 1504, 1522, 1866, 2238.
Monograph of, 1828.
Elder. Attacus cecropia on, 1533.
Cecropia worm on, 1533.
Elephantiasis or Filaria disease, 2185.
Ellopia ribearia = Eufitchia ribearia.
Elm. Enemies of the, 1350.
enemy, 1520.
gall. Cockscomb, 1384.
ELM. INSECTS AFFECTING.
Cimbex americana, 699.
laportei = C. americana.
Colopha ulmicola, 1384.
ELM. INSECTS AFFECTING—Continued.
Dryobius sexfasciatus, 583.
Galeruca calmariensis = G. xanthomelæna.
xanthomelæna, 1350, 1520, 1931, 2188, 2232, 2304, 2325, 2378, 2394.
Monocesta coryli, 1721.
Pemphiginæ, 1653.
Physocnemum brevilineum, 696.
Saperda lateralis, 583.
Schizoneura rileyi, 1059.
Tremex columba, 928.
Elm-leaf beetle, 2188.
Great, 1721.
Imported, 2232, 2304, 2325, 2378, 2394.
Notes on the imported, 1931.
and pear-tree borer, 928.
tree borer, 583, 696.
depredators, 2414.
louse. Woolly, 1059.
saw-fly, 699.
Emmon's New York report, 84.
Emperor. Eyed, 1363.
Tawny, 1363.
Emphytus maculatus = Harpiphorus maculatus.
Empoa albicans *n. sp.*, 22.
Empoasca *n. g.*, 22.
abnormis, 22.
consobrina *n. sp.*, 22.
malefica = E. viridescens.
maligna = E. obtusa.
obtusa *n. sp.*, 22.
viridescens *n. sp.*, 22, 30, 79.
Empretia stimulea, 60, 161, 424, 811, 829, 837, 1092.
Emulsions. Kerosene, 2291.
of petroleum as insecticides, 2134.
and their value as insecticides, 2126, 2200.
Enchenopa binotata, 725, 1913, 1988.
Enchophyllum binotatum = Enchenopa binotata.
Endrosa quercus = Lachnosterna quercus.
England. Doryphora 10-lineata in, 2081.
Economic entomology in, 1983.
Hessian-fly in, 2395.
Introduction of the Hessian-fly into, 2398.
English currants. Beetles in, 1260.
sparrow. Anent the, 1667.
Ennomos alniaria, 75.
magnaria = E. alniaria.
subsignaria = Eudalimia subsignaria.
Entilia concava = Publilia concava.
sinuata, 163.
Entomography of Hirmoneura, 2275.
Entomological, 371, 869, 893, 1411.
breakfast, 2311.
cabinet. Walsh, 1107.
circular. A recent British, 2509.
collection, 1328.
commission. Appropriation for, 1843.
Bulletin No. 1, 1577.
2, 1578.
3, 1736.
6, 2026.
Circular No. 1, 1575.
2, 1576.

Entomological commission. Report. First, 1643.
        Second, 1959.
        Third, 2267.
        Fourth, 2343.
    Reports of the U. S. 1757.
  correction, 1328.
  ignorance in the North, 431.
        South, 390.
  information, 1351.
  notes, 2, 1396, 1554, 1609, 1610, 1681, 1958, 2015, 2058, 2066, 2135, 2147, 2168, 2184, 2192, 2219, 2228, 2247, 2261.
    of the year, 2235.
  papers read at A. A. A. S., 1893.
  periodicals. New, 2056.
  quackery, 439.
  queries. A bundle of, 556.
  question, 1463.
  reports. Index to Ontario, 2228.
      Missouri, 1680.
  Society. American, 621.
      Address of president before Washington, 2335.
  specimens. Care of, 2200.
  speculations of the N. E. school of naturalists, 44.
      Professor Dana and his, 82.
  work at the Department of Agriculture, 1892.
  works, 831.
    wanted, 1529.
Entomologist. American, 1309.
      Salutatory, 386.
  Canadian (Review), 395, 479, 827.
  caught napping, 1110.
  of Illinois. State, 327.
  for Minnesota. A State, 1108.
  of Missouri. First report of State, 1059.
      Second, 1127.
      Third, 1301.
      Fourth, 1311.
      Fifth, 1329.
      Sixth, 1363.
      Seventh, 1423.
      Eighth, 1482.
      Ninth, 1570.
      Index to reports of State, 2026.
  for New York. State, 1863.
  New York without an, 1330.
  One day's journal of a State, 383.
  for the Pacific coast, 2022.
  Report U. S., 1878, 1721.
      1881–'82, 2119.
      1883, 2232.
      1884, 2291.
      1885, 2363.
      1886, 2394.
      1887, 2418.
  in the South. Field for the, 1109.
Entomologists at Boston, 1894.
    Death of noted, 1285.
Entomoligists in Europe. Number of, 1865.
    Self-taught, 276.
Entomology. Address on, 1454.
  all a humbug, 63.
  Best works on, 418.
  Books useful for the study of, 418.
  in Buffalo, N. Y., 2035.
    California. Interest of economic, 2053.
  Darwin's work in, 2129.
  Descriptive, 1199.
  Discussion on, 1391.
  Economic, 1362.
  in England. Economic, 1983.
  Fostering the study of economic, 2142.
  General truths in applied, 2291, 2292.
  Importance of economic, 2238.
  indeed run mad, 227, 1224.
  in Iowa. Economic, 2197.
  Lecture on, 1394.
  at Minneapolis, 2212.
  in Missouri, 1361.
    New York, 2244, 2254.
  Permanent subsection of, 2027.
  and the phonograph, 2481.
  Professor Riley to Dr. Schaffer, 2360.
  in reality. Practical, 914.
  Recent advances in economic, 2281.
      horticultural, 2230.
  its relation to agriculture and its advancement, 1329.
  Report Illinois State Horticultural Society on, 1056.
      Missouri, 1113, 1127.
  Study of, 2345.
  Work in, 202.
Entomophthora, 1813.
    calopteni, 2240.
Epeira, 1847.
  riparia = Argiope riparia.
  sp., 1144.
  spinea, 813.
Ephemera flaveola *n. sp.*, 24.
  flies. A hard story, 1043.
  myops *n. sp.*, 39.
Ephemerella *n. g.*, 24.
  consimilis *n. sp.*, 24.
  excrucians *n. sp.*, 24.
Ephemeridæ, 283, 525, 1043, 1205.
Ephemerina, 2267.
Ephemerinous genus Bætisca. Pupa of, 43.
Ephemeron, 283.
Ephestia interpunctella, 325, 1293, 1896.
  zeas = E. interpunctella.
Ephialtes gigas *n. sp.*, 385.
  pusio *n. sp.*, 385.
  pygmæus *n. sp.*, 385.
Ephydra californica, 2203.
  gracilis, 2203.
  hians, 2203.
Epicærus imbricatus, 35, 296, 1301, 1868, 2291.
Epicauta, 1600, 1643, 1651, 2238, 2267.
  atrata = E. pennsylvanica.
  cinerea, 134, 185, 401, 1056, 1558, 1600.

Epicauta corvina, 1206.
  Larval characters and habits of, 1600.
    habits, 1387.
  pennsylvanica, 38, 134, 185, 284, 362, 401, 732, 1056, 1558, 1600.
  puncticollis, 1381.
  vittata, 38, 134, 185, 401, 470, 794, 1056, 1230, 1558, 1600, 1860, 1959.
Epidemic disease of Caloptenus differentialis, 2240.
Epilachna borealis, 125, 417, 1289.
  corrupta, 2135, 2235.
Epimeris. Grape-vine, 1301, 1363.
Epipocus punctatus, 2406.
Epitrix brevis = Crepidodera brevis.
  cucumeris = Crepidodera cucumeris.
  Distribution of species of, 1782.
  hirtipennis = Crepidodera parvula.
Epizeuxis. Spruce, 2363.
Erax, 1127.
  bastardi, 1127, 1269.
Eriocampa cerasi, 1031, 1222, 1253, 1382, 2243.
Eriosoma cornicola *n. sp.*, 27 = Schizoneura cornicola.
  fungicola *n. sp.*, 27 = Schizoneura fungicola.
  lanigera = Schizoneura lanigera.
  pyri = Schizoneura lanigera.
  tessellata = Pemphigus tessellata.
  ulmi *n. sp.*, 1059 = Schizoneura ulmi.
Eristalis, 986.
Errors corrected. A few, 977.
Erynnis alceæ boring in stems of Malva sylvestris, 1602.
Erythroneura, 164.
  australis *n. sp.*, 22.
  octonotata *n. sp.*, 22.
  tricincta = Typhlocyba tricincta.
  vitifex = Typhlocyba vitis.
  vitis = Typhlocyba vitis.
  ziczac *n. sp.*, 22.
Eucalyptus. Galls on, 1965.
Euchætes egle, 413.
Euclemensia bassettella, 1972.
Eudalimia subsignaria, 75.
Eudamus tityrus, 787, 857.
Eudemis botrana, 557, 585, 792, 1059, 1232.
Eudioptis nitidalis, 808, 843, 1127.
Eudryas grata, 1127, 1363.
  unio, 831, 1127, 1363.
Eufitchia ribearia, 176, 364, 772, 877, 1068, 1224, 1570.
Eumenes fraterna, 543, 1357, 1847.
Eumenia atala, 2410.
Eumenidæ, 770.
Eunomia eagrus, 2242.
Euonymus latifolia? Chionaspis euonymii on, 2403.
  Scale on, 2403.
Euparia castanea, 2105.
Eupelmus, 384, 1932, 2343.
  allynii, 2060, 2063, 2332.
  mirabilis, 384, 563, 1363.
  vs. Antigaster, 1978.
Euphanessa mendica, 2340.
Euphoria hirtipes, 2105.
  inda, 447, 1655.
  melancholica, 372, 522, 842.
Euplectrus comstockii, 2343.
  platyhypenæ, 2343.
Eupsalis minuta, 1363.
Europe and America. Problem of the hop-plant louse in, 2400.
  The Colorado potato-beetle in, 1597.
  Grain Bruchus just imported from, 1120.
  Hagen, H. A. The Hessian-fly not imported from, 2267.
  Number of entomologists in, 1865.
European natural enemies of the asparagus beetle. New, 2458.
  parasites. Importing, 208.
Eurycreon rantalis, 2322, 2331, 2363.
Euryomia melancholica = Euphoria melancholica.
Euryptychia saligneana, 180, 1127, 2356.
Eurytoma abnormicornis *n. sp.*, 384.
  auriceps *n. sp.*, 384.
  bicolor *n. sp.*, 384.
  bolteri *n. sp.*, 1059 = var. of E. diastrophi.
  diastrophi *n. sp.*, 384, 1131.
  gigantea *n. sp.*, 384.
  globulicola *n. sp.*, 384 = var. of prunicola
  prunicida *n. sp.*, 384.
  punctiventris *n. sp.*, 384.
  seminatrix *n. sp.*, 384 = var. of auriceps.
  sp., 62, 563.
Eurytomid from stomach of Ohio shad, 1853.
Eurytomides, 384, 1223.
Euschistus fissilis, 2363.
Euthyrhynchus floridanus, 2472.
Euura orbitalis, 821.
  perturbans *n. sp.*, 197.
  s.-gemma *n. sp.*, 197, 821 = E. orbitalis.
  s.-nodus *n. sp.*, 197.
  s.-ovum *n. sp.*, 197, 821.
Evagoras viridis = Diplodus luridus.
Evarthrus orbatus, 872.
Evergreen cleora, 2363.
  and other forest trees in New England and New York. Packard, A. S. Causes of destruction of, 2232, 2291, 2363, 2364, 2382.
  plant-lice, 1039.
Evergreens. Borers in, 1324.
  Insects affecting, 271, 527, 1039, 1324, 2232, 2291, 2363.
Exartema ferrugineanum *n. sp.*, 1968 = Eccopsis ferrugineanum.
  montiferarum *n. sp.*, 1968 = Eccopsis montiferarum.
Excursion. Agricultural editorial, 1349.
  to Rocky Mountains, 988.
Exenteron ornatus *n. sp.*, 385 = Ctenisens ornatus.
Exetastes illinoiensis, 385.
  suaveolens *n. sp.*, 385.
Exochiscus *n. g.*, 385 = Orthocentrus.
  pusillus *n. sp.* = Orthocentrus pusillus.
Exochus albiceps *n. sp.*, 385.
  annulicrus *n. sp.*, 385.
  atriceps *n. sp.*, 385.
Exorista cecropiæ *n. sp.*, 1112.
  doryphoræ, 1059, 1431, 1450, 1672.
  flavicauda *n. sp.*, 1127, 1442, 1670.

Exorista leucaniæ = Nemoræa leucaniæ.
  militaris = Nemoræa leucaniæ.
  osten-sackeni = Nemoræa leucaniæ.
Exothecus prodoxi *n. sp.*, 1831.
Expected advent of the locust, 2307.
Extensile penetrating organ in a gamasid mite, 1626.
Exterminator. Fruit-pest, 2372.
Extinguisher. Treat's insect, 531.
Extreme cold on the Curculio. Influence of, 1335.
Exuviation in flight, 1961.
Exyra ridingsii, 1411.
  semicrocea, 1385, 1390.
Eyed emperor, 1363.
Eyes and luminosity of fire-flies. Development of, 1840.
  None so blind as those who shut their, 275.
Fagopyrum. Acrididæ that eat, 1645.
Failure of tea-roses, 1708.
Fall army-worm, 1256, 1267, 1282, 1301, 1482.
  canker-worm, 1423, 1482, 2238.
  web-worm, 1301, 1733, 2238, 2378, 2394.
    on hickory, 460.
    Tent caterpillars and, 819.
  wheat, Webster, F. M. Insects affecting, 2291, 2363, 2394.
Falling water. Moths attracted to, 2108.
False caterpillars on the pine, 985.
    Scotch and Austrian pines, 1011.
  chinch-bug, 1329, 1423, 2291, 2418.
  indigo gall-moth, 1127.
    Walshia amorphella on, 1127.
Fatherless and motherless race. That, 1650.
  race. Some further facts regarding that, 1658.
Fatua denudata, 1733.
Fear. A groundless, 284.
Feathers. Attagenus injuring, 56.
Felting caused by a beetle. Remarkable, 2113.
Feniseca tarquinius, 2359, 2361.
    Food-habits of, 2407.
    Notes on, 2369.
    Plant-feeding habit of, 2361.
Fertilization of Yucca, 1329, 1336, 2171.
Fertilizers of alpine flowers, 1838.
Fertilizing plants, 324.
Few errors corrected, 977.
Fidia. Grape-vine, 1231.
  longipes, 339.
  sp., 102.
  viticida *n. sp.*, 272, 339, 1059, 1231.
Field cricket, 2291.
  crops. Insects injurious to, 2238.
  for the entomologist in the South, 1109.
Fiery ground-beetle, 1059.
Fifteen-spotted lady-bird, 959, 1311.
Fifth report State Entomologist of Missouri, 1329.
Fifty million dollars. That hundred and, 1647.
Fig insects, 2194.
Fighting the Curculio, 237.
    Hessian-fly, 1587.
Figuier's Insect World (review), 408.
Filaria disease. Elephantiasis or, 2185.
  sanguinis-hominis, 2185.
Filbert grape. Grape-vine, 1329.
Fir Paraphia, 2363.
Fire blight, 22, 30, 149, 285.
  cure for potato-beetles, 121.
  flies, 396, 1705.
    Development of eyes and luminosity of, 1840.
    Intermittence of phosphorescence, 1805.
  worm, 2291.
First report noxious insects of the State of Illinois, 373.
    State entomologist of Missouri, 1059.
    U. S. Entomological Commission, 1643.
  volume. Close of the, 701.
Fischer on naphthaline as an insecticide. Review of, 2274.
Fish-fly. Large, 712, 903.
Fitch. Dr. Asa, 1781.
Flat-headed apple-tree borer, 1059, 2238, 2267.
      in horse-chestnut, 1316.
    twig borer, 555, 1423.
  borer in soft maples, 1250.
  cherry-borer, 2267.
  peach-borer, 2267.
  spruce-borer, 2267.
Flavescent clover-beetle, 2394.
Flea-beetle, 1583.
    Colorado cabbage, 2291.
    Cucumber, 1558.
    Grape-vine, 298, 1252, 1301.
    Larvæ of grape-vine, 1041, 1074.
    Striped, 2291.
    Wavy-striped, 348, 564, 2291.
    in young tobacco-plants, 1782
    Zimmerman's, 2291.
  beetles, 636, 2418.
    and Curculio, 873.
    Means against, 133.
    Satisfactory remedy for, 2236.
  like negro-bug, 1127, 1423, 2291, 2418.
Fleas feeding on lepidopterous larvæ, 2110.
Flesh-flies, 1643, 1736.
  fly. Common, 1423, 1570, 1625, 1643.
Flesh-worms, 459.
Flies in rooms. Swarms of minute, 596.
  Sucking organs of, 2182.
Flight. Exuviation in, 1961.
  in insects is directed. How, 1891.
Flights east of the Mississippi. Locust, 1549, 1613.
  Locust, 1590.
Floating apiaries, 1785.
Floods. One effect of the Mississippi, 2080.
Florida, Ashmead, W. H. Report on insects injurious to garden crops in, 2388.
  Voyle, J. Effects of cold on the scale insects of the orange in, 2277.
Flour. Poisonous, 586.
  and rye. Worms in, 72.
Flouring-mills. Beetles in, 1264.
Flower-bug. Insidious, 1127, 1423, 2418.
Flower-garden. Insects in, 936.
Flowering ash. Cocoons on, 950.
Flowers. Fertilizers of alpine, 1838.

Fluted-scale, 2389, 2418.
Recent California work against the, 2519.
Flying bug, 157,
locusts in Illinois, 1437, 1443.
Foe. Confounding friend with, 1378.
to corn. A new, 337.
cottonwood, 1834.
green corn. A new insect, 1655.
Scavenger mistaken for a, 416.
Foes. Cherry plant-lice and their, 1251.
Some friends and, 1274.
Folsom, Cal., Koebele, A. Notes on locusts about, 2363.
Food of Calopteron and Photinus, 2358.
habits of Feniseca tarquinius, 2407.
ground-beetles, 1760.
longicorn beetles, 1902.
Megilla maculata, 2145.
thrushes, 1726.
of insectivorous plants, 1499.
for lepidopterous larvæ. Dried leaves as, 2159.
man. Locusts as, 1481.
Number of molts and length of larval life as influenced by, 2167.
plants for the cotton-worm. Possible, 2064, 2119, 2155.
of Samia cynthia, 2204.
relations of Carabidæ and Coccinellidæ, 2151.
Salt-water insects used as, 2203.
for silk-worms, 1319.
trout, 1142.
Forage crops. Insects injurious to, 2238.
Forbes, S. A. Experiments on chinch-bugs, 2165.
Forbes' investigations on the food of fresh-water fishes. Professor, 2515.
Forest insects. Larvæ of injurious, 2267.
Tent caterpillar of the, 645, 688, 1181, 1200, 1301, 1331.
tree insects, 2418.
Packard, A. S. Notes on, 2253.
trees in northern New England and New York, Packard, A. S. Causes of the destruction of evergreen and other, 2232, 2291, 2363, 2364, 2382.
and weeds of Germany. Ratzeburg. Review, 1110.
Forester. Eight-spotted, 343, 1059, 1127, 1363.
Forestry exhibition. Report on the Edinburgh international, 2342.
Forficula, 1798, 2267.
Formica aphidicola *n. sp.*, 27.
fusca, 2105, 2226.
latipes *n. sp.*, 27 = Lasius latipes.
rufa, 2105, 2114,
Formicidæ, 438, 1278, 1594, 1987.
Fossil tineids, 2084.
Four-humped Curculio, 1088.
Apple-snout beetle or, 1088.
lined leaf-bug on currant, 715.
Fourth report State entomologist of Missouri, 1311.
Fourth report U. S. Entomological Commission, 2343.
Fowls. Internal mite on, 2157.
Parasites on, 1308.
France affected by Phylloxera. Half the vine area of, 2020.
Grape Phylloxera in, 2193.
Fraternal potter-wasp, 1127.
Friend. Another insect, 879.
with foe. Confounding, 1378.
unmasked, 374.
Friendly criticism, 1307.
notes, 1306.
Friends and foes. Some, 1274.
Inquiring, 1642, 1656.
and insect foes. Insect, 38.
Frog-spittle insects, 691.
Frogs, 217.
Frosted lightning hopper, 1329.
Fruit culture in the South, 2265.
foe. A new, 35.
and fruit trees. Insects injurious to, 2238.
Trimble's enemies of, 187.
growers. Insects of interest to, 367.
in northern Illinois. Six worst enemies of, 377.
insects in California, 2245.
invigorator again. Best's, 530.
Jarring down infested, 1318.
pest exterminators, 2372.
Snout-beetles injurious to, 1302.
trees again. Doctoring, 230.
Driving nails into, 87.
Icerya purchasi, an insect injurious to, 2401.
FRUIT TREES. INSECTS AFFECTING.
Epicærus imbricatus, 35.
Ithycerus noveboracensis, 16.
Lytta ænea = Pomphopœa ænea.
Oncideres cingulata ? 442, 443.
Pomphopœa ænea, 1056.
Fruit trees. Insects injurious to, 16, 31.
Tarred paper for, 1568.
worm. Cranberry, 2291.
Tomato, 1136.
Fruits and grains, Webster, F. M. Experiments on the effect of punctures of Hemiptera on shrubs, 2382.
Fuchsia beetles, 133.
Fuchsias. Beetles injuring cabbages and, 1868.
FUCHSIAS. INSECTS AFFECTING.
Haltica carinata, 133, 1868.
exapta = H. carinata.
Fulgoridæ, 737.
Fuller. Retirement of Mr., 1910.
Fuller's rose-beetle, 1708, 1721, 2291.
in California, 1740.
Habits of, 1708.
Not, 1825.
Fumago salicina, 2138.
Fumigation against orange scales, 2520.
Fungoid growths, 500.
Fungus in Cicada, 1809.
diseases of beneficial insects, 1813.
Infecting Phylloxera with, 1808.

Fungus foes, 1937.
growths to destroy insects. Use of, 1808.
Remarkable parasitic, 1313.
White-grub, 594.
Fuzzy galls on blackberry twigs, 609.
Gad-fly. Sheep, 887.
Galerita janus, 1824.
lecontei, 1824.
Galeruca calmariensis = G. xanthomelæna.
rufosanguinea = Adimonia rufosanguinea.
xanthomelæna, 1135, 1350, 1520, 1931, 2188, 2232, 2304, 2325, 2378, 2379, 2414.
Gall on acorn-cups. A new oak, 1606.
blackberry, 263.
and raspberry canes. Gouty, 1771.
chestnut, 353.
Coccid mistaken for a, 1972.
Cockscomb elm, 1384.
flies, 294.
gnat, Loew. Description of the rye, 2267.
Wagner. Observations on the new crop, 2267.
on grape-vine. Large compound, 720.
Grape-vine apple, 1329, 1898.
leaf, 724, 840, 1716.
insects, 1559.
Galls and, 1967.
Leafy oak, 774.
literature. Bibliography of, 2059.
louse. Hickory-stem, 685.
making genus of Apioninæ, 2231.
moths, 1127, 2356.
Pemphiginæ. Biological notes on, 1653.
tortricid. A pretty and unique, 2176.
Mossy-rose, 570, 1166.
nuts, 1560.
Oak-fig, 745.
leaf, 799.
on oak twigs. Cynipid, 1822.
Pelargonium, 1764.
Pithy blackberry, 1131.
Pod-like willow, 1170.
Prickly rose, 1194, 1245.
Raspberry gouty, 1124.
root, 1149.
Rose, 1235.
on Solidago leaves, 1924.
spotted touch-me-not, 852.
Sugar-maple mite, 1265.
Trumpet grape, 791, 1116.
Galleria cereana, 581, 716, 904, 1059, 1293, 1357, 1508, 1723.
Gallmücke. Beschreibung einer den Birnen schädlichen, 2392.
Galls, 137, 1561.
on blackberry, 263.
cottonwood leaf, 713.
Unsightly, 446.
Cypress, 1180.
on Eucalyptus, 1965.
and gall insects, 1967.
Golden-rod, 798.
Grape, 111, 160.
Galls on the grape-vine. Leaf, 724, 840, 1716.
growing on wild sage, 1347.
Hackberry psyllid, 2203.
Jumping seeds and, 1496, 2163, 2173.
on leaves of soft maple, 445.
wild grape-vine. Conical, 1077.
made by moths, 1127.
Phylloxera. New hickory, 1901.
and mining in apple-twigs. Small, 552.
Oak and rose, 1037.
Production of, 1056.
on sugar-berry, 762.
supposed dock, 1165.
and their architects, 518, 821.
on white oak. Woolly, 739.
Gamasid mite. An extensile penetrating organ in a, 1626.
Gamasus juloides infesting Iulus marginatus, 963.
Garden crops. Experiments with insecticides upon insects affecting, 2344.
in Florida, Ashmead, W. H. Report on insects injurious to, 2388.
insects, Alwood, W. B. Tests with insecticides on, 2388.
Insects in the flower, 936.
vegetables. Insects injurious to, 2238.
web-worm, 2363.
Gardens. Ants' nests in, 496.
Destroying black ants in, 438
Toads in, 822.
Gargaphia amorphæ, 45.
tiliæ, 45, 400.
Gas treatment for scale insects. Coquillett, D. W., 2418.
waste *vs.* Curculio, 549.
Gases against scale insects. Use of, 2389.
Gasteracantha cancer, 2111.
Gastroidea cyanea, 316, 1165.
Gastropacha americana, 812.
velleda = Tolype velleda.
Gastrophilus equi, 1391, 1563, 2238.
Gastrophysa cyanea = Gastroidea cyanea.
Geelong, Victoria. Grape Phylloxera at, 1732.
Gelechia abietisella, 2232.
cerealella, 2291.
gallæ-solidaginis *n. sp.*, 1059, 1165, 2213.
glandulella *n. sp.*, 1306.
Hemlock, 2232.
White-heart hickory, 2363.
Gemminger and Harold's Catalogus Coleopterorum, 1866.
General index and supplement to the Missour reports, 2026.
truths in applied entomology, 2291, 2292.
Genuine army-worm in the West, 2009.
vs. bogus chinch-bugs, 1402.
Genus grinding, 2120.
Geographical distribution of the Rocky Mountain locust, 2267.
range of species, 1614.
Geometer. Chickweed, 1059, 1154.
Knot-weed, 1059.
Geometra catenaria = Zerene catenaria.
Geometridæ. Larval characters, 165.

Georgia. Rascal leaf-crumpler in, 1962.
German asters. Diabrotica vittata on, 148.
thoroughness, 1597.
Gigantic rhinoceros beetle, 580, 1216, 1292.
water-bug, 534, 733.
Gilly-flowers. Cabbage-worms upon, 614.
Plutella cruciferarum injuring, 614.
Gilt gold-beetle, 790.
Girdled pear-twigs, 848.
Girdler. Twig, 476, 1938.
Girdling habits of Pædisca obfuscata, 2405.
Glassy cut-worm, 1059, 2291, 2394.
Mesochorus, 1127.
winged soldier-bug, 1301.
Glaucopid caterpillar. Protective device employed by a, 2242.
Glorified squash-bug, 262.
Glossina morsitans, 1467.
Glover, Townend. Obituary, 2218, 2258.
Glow-worm, 1917.
Nature of the phosphorescence of, 1810.
That, 1097.
Glyphe viridascens *n. sp.*, 12.
Glypta alboscutellaris *n. sp.*, 385.
diversipes *n. sp.*, 385.
ruficornis *n. sp.*, 385.
rufipleuralis *n. sp.*, 385.
Gnats, 625.
Goat-weed butterfly, 1117, 1127, 1329.
Paphia glycerium feeding on, 1329.
Going it blind, 588.
Gold-beetle. Gilt, 790.
Drop of, 775.
Golden-rod galls, 798.
GOLDEN-ROD. INSECTS AFFECTING.
Cecidomyia carbonifera, 1924.
solidaginis, 798.
Euryptychia saligineana = Pædisca scudderiana.
Gelechia gallæ-solidaginis, 1059, 1165.
Graphtholitha olivaceana, 2285.
Nectarophora rudbeckiæ, 2205.
Pædisca scudderiana, 180.
Siphonophora rudbeckiæ = Nectarophora rudbeckiæ.
Trypeta solidaginis, 180, 798, 1059.
Golden-rod tortoise-beetle, 1127.
Gomphocerus shastanus *n. sp.*, 1959.
Gomphus amnicola *n. sp.*, 24.
consobrinus *n. sp.*, 39.
fluvialis *n. sp.*, 24.
grasilinellus *n. sp.*, 24.
quadricolor *n. sp.*, 39.
vastus *n. sp.*, 24.
ventricosus *n. sp.*, 39.
Gonatopus contortulus, 2116.
pedestris, 2116.
pilosus. Biology of, 2116.
Goniocotes hologaster, 1094.
Good words. More, 532.
Gooseberries and currants. Green worms on, 136.
Gooseberry and currant worms, 772.
fruit-worm, 1059.
GOOSEBERRY. INSECTS AFFECTING.
Dakruma convolutella, 1059.
Ellopia ribearia = Eufitchia ribearia.
Epicærus imbricatus, 35.
Eufitchia ribearia, 772, 1068, 1570.
Nematus ribesii, 140, 228, 333, 756, 772.
ventricosus = N. ribesii.
Pristiphora grossulariæ, 40, 189, 772.
Tenthredinid, 136.
Gooseberry saw-fly, 140.
Imported, 228, 333.
span-worms, 1068, 1570.
worm, 189.
worms. Currant and, 1570.
Imported, 756.
Gordiacæa, 612.
Gordius, 861.
aquaticus, 447, 1143.
varius, 1143.
Gortyna nebris, 1646.
nitela, 331, 401, 632, 694, 734, 754, 820, 862, 940, 976, 993, 1009, 1056, 1059, 1210, 1558, 1589, 1595, 1646, 1870, 2229.
sp., 138.
Gouty gall on blackberry and raspberry canes, 1771.
Governor of Kansas on the grasshopper question. Report to, 1573.
Governors of Western States on the Rocky Mountain locust, 1557.
Gracilaria. Purple willow, 2363.
Grain Aphis, 2394.
Bad work of, 1638.
vs. rust, 1806.
Bruchus, 1301.
of Europe just imported, 1120.
Chinch-bug not in seed, 888.
GRAIN. INSECTS AFFECTING.
Aphid, 99.
Asopia farinalis, 2337.
Bruchus granarius, 1301.
Gelechia cerealella, 2291.
Nectarophora granaria, 126.
Grain moth, 2337.
Angoumois, 2291.
A new leaf-hopper injurious to small, 1767.
plant louse, 99, 126, 1127.
Silvanus, 1259.
Sphenophorus, 2363, 2394.
weevil, 15, 2291.
weevils. Aniseed *vs.*, 1742.
Grains. Calandra granaria in, 1259.
and grasses, Webster, F. M. Insects affecting, 2394.
Webster, F. M. Experiments on the effect of punctures of Hemiptera on shrubs, fruits, and, 2382.
Granddaddy long-legs, 838.
Granulated cut-worm, 2291.
Grape-bark louse, 106.
berry moth, 557, 585, 792.
cane-gall Curculio, 1059.
canes and apple-twigs. Eggs in, 1323.
Egg on, 855.
punctured, 513, 1333.

Grape Curculio, 373, 1059.
disease, 1311.
fruit worm, 1059.
gall. Trumpet, 791, 1116.
galls, 111, 160.
insects, 164, 267, 1056, 1569.
leaf-folder, 1301, 1579.
folders eaten by spiders, 468.
Hairy, 664.
gall-louse, 373, 1301, 1311.
galls, 127, 1295, 1435, 1531.
Leaf-hoppers of the, 399.
leaf-louse, 916.
Phylloxera enemy, 1530.
Phylloxera, 1329, 1363, 1373, 1482, 1721
in California, 1727.
France, 2193.
Geelong, Victoria, 1732.
New biological facts regarding, 1421.
Newest facts of, 1404,
not at the Cape, 1841.
permanently destructive, 1907.
Notes on the, 1952, 2291.
natural history of, 1439.
Use of guano for, 1837.
root-borer, 373, 1301.
New, 1059, 1127.
rot. Phylloxera and, 1623, 1628.
saw-fly, 2291.
scale insect, 1706.
seed Curculio, 1059.
Insect infesting, 482.
maggot, 1127.
vine Aphis, 170.
apple-gall, 1329, 1898.
An apple growing on a, 403, 436.
Bark-lice on, 1212.
beetles, 113, 129, 133, 339, 354.
borer, 429.
caterpillars, 124.
caterpillars. Black, 1018.
Colaspis, 231, 1301.
again, 1311.
Conical galls on leaves of wild, 1077.
Epimeris, 1301, 1363.
Fidia, 272, 1059, 1231.
filbert-gall, 1329.
flea-beetle, 298, 1252, 1301, 1821, 1855.
Larvæ of, 1041, 1074.
and fuchsia beetles, 133.
a hickory. Hybrid between, 1284.
hoppers, 1024.
Injured strawberry and, 682.
insects, 128, 725.
GRAPE-VINE. INSECTS AFFECTING.
Acoloithus falsarius, 124.
Acronycta oblinita, 1208, 1301.
Ægeria polistiformis = Sciapteron polistiformis.
Alypia octomaculata, 1059, 1127, 1130, 1208, 1363.
Amblycorypha oblongifolia, 1329.
Ampeloglypter sesostris, 1059.
Ampelophaga myron, 1086, 1127, 1247.
GRAPE-VINE. INSECTS AFFECTING—Continued.
Amphicerus bicaudatus, 1185.
Anomala lucicola, 113.
Aphis vitis, 102, 170.
Apis mellifica, 441.
Blennocampa pygmæa, 1252.
Bostrichus bicaudatus = Amphicerus bicaudatus.
Capsus oblineatus = Lygus pratensis.
Cecidomyia vitis-coryloides, 1329.
lituus, 791, 1116.
pomum, 403, 1284, 1329, 1898.
viticola, 791, 1077, 1116, 1329.
Cecidomyid, 111.
Cerambycid, 429.
Ceresa bubalus, 1323, 1329.
Chærocampa pampinatrix = Ampelophaga myron.
Cœliodes inæqualis = Craponius inæqualis.
Colaspis flavida, 129, 133, 135, 231, 1301, 1311.
Corimelæna pulicaria, 1046.
Craponius inæqualis, 373, 1059.
Curculio, 267.
Dactylosphæra vitifoliæ = Phylloxera vastatrix.
Darapsa myron = Ampelophaga myron.
Desmia maculalis, 468, 1158, 1301, 1569, 1579.
Drosophila ampelophila, 2119.
Eggs, 855.
Enchenopa binotata, 725.
Enchophyllum binotatum = Enchenopa binotata.
Erythroneura sp., 164.
tricincta = Typhlocyba tricincta.
vitis = Typhlocyba vitis.
Eudemis botrana, 557, 585, 792, 1059.
Eudryas grata, 1127, 1363.
unio, 1127, 1363.
Fidia longipes, 339.
sp., 102.
viticida, 272, 339, 1059, 1231.
Galls, 128, 791.
Graptodera chalybea = Haltica chalybea.
Haltica chalybea, 203, 298, 1041, 1252, 1255, 1301, 1821, 1855.
Harrisiana americana, 164, 213, 1127, 1136.
Isosoma vitis, 482, 484, 1059, 1127.
Lasioptera vitis, 720, 1329.
Leaf-hopper, 484.
Lecanium vitis = Pulvinaria vitis.
Lygus pratensis, 682.
Macrodactylus subspinosus, 373, 565, 1375.
Membracid, 286.
Membracis ampelopsidis, 1183.
Œcanthus niveus, 286, 414, 723, 1059, 1323, 1329, 1333, 1691, 2195.
Oncometopia undata, 36, 79, 164, 399.
Orocharis saltator, 513, 1323, 1329.
Orthosoma brunneum, 397.
cylindricum = O. brunneum.
Oxyptilus periscelidactylus, 664, 1059, 1175, 1301.
Pelidnota punctata, 113, 129, 354, 725, 1221, 1301.
Pemphigus vitifoliæ = Phylloxera vastatrix.
Penthina vitivorana = Eudemis botrana.

GRAPE-VINE. INSECTS AFFECTING—Continued.
Philampelus achemon, 1091, 1127.
pandorus, 1102.
satelliatia = P. pandorus.
Phylloxera vastatrix, 127, 160, 373, 565, 724, 840, 916, 1281, 1295, 1301, 1311, 1325, 1329, 1342, 1363, 1374, 1376, 1421, 1423, 1435, 1439, 1482, 1530, 1531, 1623, 1628, 1716, 1721, 1727, 1732, 1837, 1841, 1895, 1900, 1907, 1952.
vitifoliæ = P. vastatrix.
Poeciloptera pruinosa, 1329.
Polycaon confertus, 2103.
Prionus imbricornis, 1127, 1274.
laticollis, 561, 1059, 1081, 1127.
Proconia undata = Oncometopia undata.
Procris americana = Harrisiana americana.
falsarius = Acoloithus falsarius.
Psychomorpha epimeris, 1301, 1363.
Pterophorus periscelidactylus = Oxyptilus periscelidactylus.
Pulvinaria vitis, 106, 1212, 1706, 1716.
Pyrophila pyramidoides, 671, 1301.
Sciapteron polistiformis, 373, 1301, 1509.
Selandria vitis = Blennocampa pygmæa.
Sinoxylon basilare, 1311.
Smilia auriculata, 1183.
Spilosoma virginica, 1202, 1301.
Tettigonia coagulata, 1024.
vitis = Typhlocyba vitis.
Thyreus abbotii, 763, 1018, 1127, 1248.
Typhlocyba tricincta, 25.
vitis, 203, 686.
Grape-vine. Insects injurious to the, 267, 1059, 1081, 1086, 1091, 1102, 1118, 1130, 1137, 1158, 1175, 1202, 1221, 1255, 1281, 1301, 1311, 1329, 1363.
Large compound gall on, 720.
leaf-galls, 724, 840, 1716.
hoppers, 484, 686.
pest. More about the, 1376.
plume, 1059, 1301.
Procris, 213.
root-borer, 1509.
roots. Wood-lice on, 1906.
tomato-gall, 1329.
trumpet-gall, 1329.
worm: Dark, 763.
Green, 671.
Pyramidal, 1301.
vines. Bugs on, 1046.
Caterpillars on, 1208.
On the cause of deterioration in some of our native, 1342.
Egg-puncture in raspberry and, 2195.
Eggs of the tree-cricket on, 723.
mistaken for chinch-bug. Bugs on, 398.
to Phylloxera in sandy soil. Resistance of, 2250.
Rose-chafers on, 1375.
Grapes cut off by tree-cricket, 414.
Honey-bees eating, 441.
Grapes spoiled by something, 464.
Grapholitha gallæ-saliciana *n. sp.*, 1968.
Grapholitha ninana *n. sp.*, 2176.
olivaceana *n. sp.*, 1968.
Habits of, 2285.
prunivora, 367, 373, 1795.
Graphops pubescens, 2229.
Grapta, 1301.
comma, 461, 1140.
interrogationis, 420, 444, 1306.
Graptodera carinata = Haltica carinata.
chalybea = Haltica chalybea.
punctipennis = Haltica punctipennis.
Grass-bug and its habits, 882.
insects, 541.
GRASS. INSECTS AFFECTING.
Laphygma frugiperda, 1127.
Leucania unipuncta, 1877.
Grasses, Webster, F. M. Insects affecting small grains and, 2394.
Grasshopper. The, 1588.
Colorado, 502.
eggs, 536, 667.
Trombidium preying on, 624.
Governors of Western States on the Rocky Mountain, 1557.
Hateful, 373, 475.
injuries. New method of counteracting, 2235.
injury in the near future. Probabilities of, 2335.
Outlook for locust or, 2461.
machine. A satisfactory, 1592.
A new enemy of the, 1541.
Parasite on hateful, 728.
pest of the West. Important observations on, 1571.
prospect, 1693.
question. Report to governor of Kansas, 1573.
ravages in California, 2323.
Rocky Mountain, 1557.
Western, 1998.
year? Is this a, 1565.
Grasshoppers, 368, 391, 402, 433, 1363.
Destructive, 2363.
and locusts, 26, 147, 929.
Mites on, 146.
Rear-horses *vs.*, 590.
Young, 2377.
Grass-worm, 2119.
Gray straight-horned snout-beetle. Large, 1033.
Gray. Personal reminiscences of Dr. Asa, 2419.
Greasy cut-worm, 1059, 2291, 2418.
Great discovery. Curculio extermination possible, 1173.
elm-leaf beetle, 1721.
Lebia, 1301.
leopard moth, 1311.
Green apple-leaf tyer, 1311.
corn. A new insect foe to, 1655.
grape-vine worm, 671.
hag moth, 1233.
striped maple-worm, 1329.
worms on gooseberries and currants, 136.
Greenhouse pests, 508.
plants, 508.

Gregarious worm on horse-chestnut, 1192.
walnut caterpillars, 1045.
willow-worms, 856.
Ground-beetle. Another herbivorous, 2042.
Fiery, 1059.
Murky, 486.
Pennsylvania, 1059.
Subangular, 372.
beetles, 1127, 1558, 1625, 1643.
Eggs of, 692.
Food-habits of, 1760.
Vegetal feeding, 1738.
Groundless fear, 284.
Growth of insect eggs, 2241.
Grub fungus. White, 594, 640, 1064, 1430, 1436, 1599, 1803, 1823.
information wanted. White, 1072.
White, 68, 410, 1020, 1059, 2238, 2363, 2394.
worm, 54.
Grubs and guess-work, 1440.
Gryllidæ, 929, 2267.
Gryllotalpa, 2267.
borealis, 562, 1270, 1798.
columbia, 562.
longipennis = G. columbia.
Gryllus, 2267, 2384.
abbreviatus, 143, 433.
Guano for grape Phylloxera. Use of, 1837.
Guard. Be on the, 708.
Guess-work. Grubs and, 1440.
Guide to the study of insects. Review of Packard's, 395, 479, 623, 827.
Gymnetis nitida = Allorhina nitida.
Gyrinus larva in stomach of shad, 1853.
Habit. Change of, 2096.
Hackberry butterflies, 1356, 1363.
HACKBERRY. INSECTS AFFECTING.
Apatura alicia, 1363.
celtis, 1356, 1363.
clyton, 1356, 1363.
herse = A. clyton.
lycaon = A. celtis.
Galls, 791.
Pachypsylla c.-mamma, 2208.
c.-venusta, 2208.
Hackberry psyllid galls, 2208.
Hadena, 2238.
chenopodii = Mamestra trifolii.
devastatrix, 1056, 1059, 2291, 2394, 2355.
juncta, 1056.
renigera, 964, 1059.
sp., 1047.
subjuncta, 901, 1059.
Hæmatopis grataria, 1059, 1154.
Hag-moth. Green, 1233.
larva, 777, 1272.
Hagen, H. A. The Hessian-fly not imported from Europe, 2267.
Observations on certain North American Neuroptera, 39.
Hagen's mystery. Dr., 1943.
Hair snakes, 612, 861, 1143.
worms, 861, 1643, 1959.
Hairy caterpillar, 558.
grape-leaf folders, 664.
Haldeman, S. S. Death of, 1909.
Halictus sp., 800.
Halisidota antiphola *n. sp.*, 40 = H. tessellata.
caryæ, 45.
harrisii *n. sp.*, 45 = H. tessellata.
tessellata, 40, 45, 50.
Haltica alternata = Disonycha alternata.
carinata, 133, 1868.
chalybea, 203, 298, 1041, 1074, 1252, 1255, 1301, 1583, 1821, 1855.
cucumeris = Crepidodera cucumeris.
exapta = H. carinata.
helxines = Crepidodera helxines.
punctipennis, 2383, 2468.
striolata = Phyllotreta vittata.
Haltichella perpulchra, 11, 12.
Halticidæ, 873, 1858, 2236.
Ham-beetle. Red-legged, 1363.
Hams. Skippers injuring smoked, 1734.
Hand-maid moth, 2222.
Hard story. Ephemera flies, 1043.
Harlequin cabbage-bug, 1099, 1311, 1534, 2238, 2263, 2291.
Harmless insects, 1526.
Harold's Catalogus Coleopterorum. Gemminger and, 1866.
Harpactor cinctus = Milyas cinctus.
Harpalus, 1643.
caliginosus, 3, 486.
erraticus, 1537.
pennsylvanicus, 372.
Harpiphorus maculatus, 499, 955, 965, 1056, 1264, 1570, 1586, 2324.
Harris's bark-louse, 373.
correspondence (review), 623.
insects injurious to vegetation (review), 568.
Harrisina americana, 164, 213, 789, 1056, 1127, 1136.
Harvest bugs, 412.
fly. Dog-day, 1546.
mites, 1326.
Hatch pupæ. How to, 509.
Will unimpregnated eggs, 1029.
Hatching? Are the locusts, 1566.
Hateful grasshopper, 373, 475.
Parasites on, 728.
locust, 1452.
locusts. Prairie fires and, 1453.
Hawk's pellets, 601, 643.
Hawthorn. Worms on, 1051.
Hay. Worms under mulch, 1161.
Head-maggot, 450, 1059.
of winged insects, Packard, A. S. Number of segments in the, 2267.
Hedge-hog caterpillar, 1153.
Helia americalis, 2414.
Helianthus. Lixus macer bred from, 2404.
Heliothinæ. Synopsis of (review), 2178.
Heliothis armigera, 192, 636, 820, 993, 1136, 1256, 1301, 1353, 1664, 1695, 1886, 1915, 2119, 2238, 2343.
marginidens = Pyrrhia exprimens.
phlogophagus, 936, 945, 993, 1056.
umbrosus, 2343.
Hellgramite, 1570, 1584.
fly, 473, 1329.
Helops æreus, 751.

Helops micans, 963.
pullus = H. æreus.
Hemaris thysbe, 879.
Hemerobidæ, 2267.
Hemileuca maia, 595, 722, 735, 760, 1329, 1352.
Hemiptera, 400, 1329, 2267.
upon shrubs, fruits, and grains. Webster, F. M., 2382.
Experiments of the effects of punctures of, 2382.
Hemipterological studies, 2034.
Hemispherical larva at bottom of ant hill, 1789.
Hemiteles, 77,
cressoni *n. sp.*, 1059.
fuscatus *n. sp.*, 380 = var. of nematívorus.
nematívorus *n. sp.*, 380.
thyridopterygis *n. sp.*, 1059.
Hemlock Gelechia, 2232.
HEMLOCK. INSECTS AFFECTING.
Buprestid, 2267.
Cerambycid, 2267.
Gelechia abietisella, 2232.
Hen. Death of a, 1094.
Henderson's experiments. Mr., 1688.
Henous, 1643.
confertus, 1600.
larval habits, 1387.
Heptagenia *n. g.*, 39.
cruentata *n. sp.*, 39.
maculipennis *n. sp.*, 39.
simplex *n. sp.*, 39.
Herbivorous ground-beetle. Another, 2042.
Herpetogomphus rupinsulensis *n. sp.*, 24.
Hesperid larva feeding on Canna, 1897.
Hessian-fly, 150, 250, 426, 1581, 1665, 2008, 2267, 2365.
Effects of drought on, 2031.
in England, 2395.
into England. Introduction of, 2398.
Fighting the, 1587.
half way around the world, 2440.
Koeppen's account of the, 2267.
in North America. Early references to the, 2267.
Not the, 1445.
imported from Europe. Hagen, H. A., 2267.
Parasites of, 2332.
prior to the Revolution. Insects confounded with the, 2470.
Probable parthenogenesis of the, 1787.
in seed-wheat, 494.
Silesia. Cohn, F., 2267.
Wheat-rust and the, 1605.
Hetærina pseudamericana *n. sp.*, 39.
rupamnensis *n. sp.*, 39.
rupinsulensis *n. sp.*, 24.
scelerata *n. sp.*, 39.
texana *n. sp.*, 39.
Heteronychus relictus = Ligyrus relictus.
Heteropelma datanæ *n. sp.*, 2526.
Heteroptera, 1736.
Defensive odors of the, 354.
Hexagenia *n. g.*, 39.
bilineata, 372, 1043, 1851,
Hexaplasta, 1749, 1932.
zigzag *n. sp.*, 1749, 1932, 2343.
Hexapoda, 1955, 2267.
Poisonous, 2399.
Hibernating Aletia chrysalids. Supposed, 1927.
apple-worms. Severe cold and, 2037.
Hibernation of Aletia xylina in the United States a settled fact, 2141.
Amphipyra pyramidoides, 1471.
army-worm, 2086.
the cotton-moth, 1728.
worm moth, 1953.
insects, 1129.
Hickory-bark borer, 938.
borer, 269, 308, 1401.
Citheronia regalis on shell-bark, 775.
Eccopsis, 2363.
Fall web-worm on, 460.
galls, 360.
made by Phylloxera. New, 1901.
Gelechia. White heart, 2363.
Hybrid between a grape and a, 1284.
HICKORY. INSECTS AFFECTING.
Arhopalus pictus = Cyllene pictus.
Cecidomyia tubicola, 1232.
Citheronia regalis, 775.
Clytus pictus = Cyllene pictus.
Cyllene pictus, 89, 269, 308, 1516.
Datana ministra, 2222.
Eccopsis, 2363.
Galls, 791.
Gelechia, 2363.
Hyphantria cunea, 460.
textor = H. cunea.
Phylloxera caryæ avellana, 1901.
caulis, 360, 685.
globuli, 360.
scissa, 1901.
Scolytus caryæ = S. 4-spinosus.
4-spinosus, 938, 1329, 1401, 1754.
Hickory Scolytus, 938.
stem gall-louse, 685.
vs. locust-borer, 1516.
Hipparchiscus *n. g.*, 40 = Aplodes.
venustus *n. sp.*, 40 = Aplodes mimosaria.
Hippodamia. Ambiguous, 2119.
convergens, 639, 1251, 1431, 1672.
glacialis 849.
maculata = Megilla maculata.
Hirmoneura. Entomography of, 2275.
Larval stages and habits of, 2169.
obscura, 2169, 2275.
Hirundo americana, 1502.
fulva, 1502.
Hispa scutellaris = Odontota dorsalis.
Hitherto unknown life-habits of two genera of bee flies, 2002.
Hockeria *n. g.*, 11 = Haltichella.
perpulchra *n. sp.*, 11 = Haltichella perpulchra.
Hog caterpillar of the vine, 1127.
infested with parasites, 1247,
Hogs *vs.* bugs, 387.
Holcaspis mamma, 518,

Holes around the roots of young ash-trees in the nursery, 471.
Holocera glanduella *n. sp.*, 1310, 1311.
Homalomyia leidyi *n. sp.*, 382.
    pruinivora *n. sp.*, 382.
    wilsoni *n. sp.*, 382.
Home. Colorado potato-beetle's native, 1462.
Homoptera. Egg-slits made by, 79.
Honey-ant. Peculiarities of the Mexican, 1417.
    bee. Braula cœca not particularly injurious to, 1982.
        Bug preying on, 13.
        Dipterous enemies of, 704.
        Discussion on, 1455.
        Insect enemies of, 1059.
    bees carnivorous? Are, 2098.
        eating grapes, 441.
    locust seed weevil, 1026.
        weevil, 1474.
    producing oak gall, 1942.
    Too fond of, 764.
Honor. Deserved, 2124.
Hop Aphis, 1001, 2291, 2394, 2418.
    and the cranberry, Smith, J. B. Insects affecting the, 2291.
    growing in the West, 235, 279.
    insects, 1001.
    plant louse in Europe and America. Problem of the, 2400.
        fully solved. Problem of the, 2396.
        Life-history of the, 2393.
        Problem of the, 2400.
    vine caterpillars, 444, 979.

HOP-VINE. INSECTS AFFECTING.
    Grapta interrogationis, 420, 444.
    Hypena humuli = H. scabra.
        scabra, 979, 1001.
    Hyperchiria io, 420.
    Phorodon humuli, 235, 279, 1001, 2393, 2394, 2396, 2400.
    Saturnia io = Hyperchiria io.
    Vanessa interrogationis = Grapta interrogationis.

Hop-vine. Insect foes of the, 420.
Hoplophora arctata *n. sp.*, 1363, 1370.
Hopper in Iowa, 1585.
Horinus lævis = Merinus lævis.
Horizontal insect boxes, 1963.
Hormaphis spinosus, 1678.
Horn-bug, 1636.
    Cocoon of, 784.
Horned Passalus, 1311.
    Egg of, 1329.
Hornia *n. g.*, 1601, 1643.
    minutipennis *n. sp.*, 1601, 1651.
    Structure and development of, 1651.
Horn's classification of the Carabidæ, 2051.
Horse bot-fly, 2238.
    chestnut. Flat-headed apple-tree borer in, 1316.
        Gregarious worms on, 1192.

HORSE-CHESTNUT. INSECTS AFFECTING.
    Cacœcia rileyana, 1192.
    Chrysobothris femorata, 1316.
    Tortrix rileyana = Cacœcia rileyana.

Horse-hair snakes, 612.
Horses. Lice on, 258.
Horticultural entomology. Recent advances in, 2230.
Horticulture. Utilization of ants in, 2089, 2137.
Houghton's insects in the orchard, 188.
House-fly, 864, 2078.
    Proboscis, 1783.
How great wits jump together, 567.
    to hatch pupæ, 509.
Howard, L. O. Chinch-bug, 2418.
    Codling-moth, 2418.
Howell, M. A. Experience with the spring canker-worm, 2267.
Hubbard, H. G. Miscellaneous notes on orange insects, 2164.
    Report on cotton insects, 2343.
    Rust of the orange, 2291.
    Scale insects of the orange, 2119.
Hudson Bay Lepidoptera, 1985.
Hull's Curculio catcher, 372, 651, 875.
Hulst's observations on Pronuba yuccasella, Mr., 2371.
Human animal. Parasites of the, 497.
    body. Larvæ in, 382.
    lungs. On a larva of Scenopinus from, 1348.
Humbert on Lucilia, 2255.
Humblebees, 800.
Humbug. Another, 195.
        new Curculio, 589.
    Entomology all a, 63.
    New, 122.
        Curculio, 680.
Humming-bird moths caught by the tongue, 1388.
Hundred and fifty million dollars. That, 1647.
    legged worms, 219.
Hybrid between a grape-vine and a hickory, 1284.
Hydrachna belostomæ *n. sp.*, 1632.
Hydrophilus piceus, 2016.
    triangularis, 2016.
        Notes on, 2016.
Hylecœtus lugubris, 575.
Hylesinus opaculus, 1656, 1721.
    trifolii, 1690, 1721, 1777, 1846, 2512.
Hylobius confusus, 700, 1168.
    stupidus, 845.
Hylurgops, Packard, A. S. Development of, 2267.
Hylurgus pinifex, 2267.
Hymenoptera, 543, 1329, 1736, 2267.
    Description of North American, 385.
    Parasitic, 310.
    Willow galls made by, 46.
    Workers among, 311.
Hymenorus obscurus, 2105.
    rufipes, 2105, 2226.
        as a myrmecophilous species, 2226.
Hypena humuli, 9 = H. scabra.
    scabra, 979, 1001, 1976, 2343.
    scabralis, 2343.
Hyperchiria io, 420, 809, 1264, 1329, 1352, 1389, 2343.
    varia = H. io.
Hypermetamorphoses of Meloidæ, 2191.
Hyphantria cunea, 112, 242, 454, 456, 460, 819, 1301, 1733, 1849, 1995, 2238, 2378, 2379, 2394.
    textor = H. cunea.

Hypoderma bovis, 898, 1563, 2238
Hyponomeuta, 2000.
malinella, 2000.
multipunctella, 2000.
5-punctella, 1603, 1804.
Hypopus, 1703.
Icerya. Bull. No. 15 on, 2389.
Life-history of, 2386.
in New Zealand. Enemies of, 2479.
purchasi, 2386, 2394, 2400, 2401, 2415.
an insect injurious to fruit-trees, 2401.
Original habitat of, 2415.
sacchari, 2415.
Ichneumon, 1541.
brevipennis, 1570.
cæruleus, 1802.
Cocoons of, 63, 183.
flies, 662, 679, 1643, 1625.
Cocoons of, 851.
fly. Army-worm, 1127.
fly mistaken for a wasp, 477.
leucaniæ, 1670.
obsoletus *n. sp.*, 1570 = var. of brevipennis.
signatipes, 1802.
from stomach of bluebird, 1878.
wing, 50, 197, 385.
Ichneumonidæ, 2516.
Descriptions of new, 385.
Habits, 158.
Ichthyura inclusa, 856.
Icy lady-bird, 1311.
Identity. Mistaken, 1593.
Ignorance in the North. Entomological, 431.
South. Entomological, 390.
Illinois. Entomological tour in Southern, 372.
First report noxious insects of, 373.
Flying locusts in, 1437, 1443.
Natural History Society. Address before, 5.
New Cynipidæ of, 41.
Pseudoneuroptera, 24.
A rare capture in, 1211.
Six worst insect enemies of the fruit-growers in northern, 377.
State entomologist of, 327.
Horticultural Society. Report of committee on entomology of, 1056.
Imbricated snout-beetle, 1301, 2291.
Imitative butterflies, 613.
Impatiens fulva. Galls on, 852.
Imperial moth. Larva of, 1087, 1268.
Importation of insect parasites, 2461.
Lestophonus. Further on the, 2541.
Imported cabbage-butterfly, 1127, 2291.
worm, 2232, 2238, 2291.
Bacterial disease of the, 2251.
New remedy for, 2298.
in the South, 1714.
Successful introduction of a parasite of the, 2291.
Imported carpet-beetle, 1699.
currant-worm, 1127, 1570, 2238.
fly and its parasite, 380 381.
elm-leaf beetle, 2232, 2304, 2325, 2378, 2394.
gooseberry saw-fly, 228, 333.
worms, 156.
insects, 140, 225.
and native American insects, 1115. 1127.
orchard Scolytus, 2233.
plants and insects, 1339.
Importing European parasites, 208.
Improved method of spraying trees for protection against insects, 2211.
In memoriam B. D. Walsh, 1098.
Index to reports State entomologist of Missouri, 2026.
Indian-corn insects, 23, 138.
Indiana, Butler, A. W. The periodical Cicada in southeastern, 2364.
Webster, F. M. The season's observations in, 2418.
Indigo. Walshia amorphella on false, 1127.
Industry in the United States. Silk, 2268.
Inexpert defense, 2476.
Inflating Chalcis, 1059.
Information wanted, 1111.
Injurious caterpillars, 151.
insects, 126.
in California, 2074.
Inquilines in galleries of common white ant, 1729.
and Psenides. Relations of, 41.
Inquiries answered, 180.
Inquiring friends, 1642, 1656.
Insect boxes. Vertical *vs.* horizontal, 1963.
catching habits of Sarracenia variolaris, 1385, 1390.
changes, 388.
collection for sale, 2046.
collections. Naphthaline cones for, 2073.
Protection of, 2180.
damage to the corks of wine-bottles, 2477.
defoliators. Shade-trees and their, 2378, 2379.
destroyer. Paris green as an, 1447.
eggs, 243, 286, 291.
Growth of, 2241.
enemies, 1583.
of the Colorado potato-beetle, 411.
growing rice, 1911.
to the rice-plant, 1949.
extinguisher. Treat's (review), 531.
foe of the apple-tree borer, 421.
to green corn. A new, 1655.
foes of the apple-tree, 467.
army-worm, 12.
bark-louse, 417.
hop-vine, 420.
pea, 14.
potato, 1558.
found about orange-trees, 1798.
friend. Another, 879.
friends and insect foes, 38.
on grape, 1569.

Insect injurious to junipers, 1713.
wheat. A new, 2288.
killer. Worthlessness of the sparrow as an, 2413.
life, 5.
and sun spots, 2094.
locomotion, 1955.
named, 2297.
pest. A new, 1686.
plagues, 2198.
A plant growing out of an, 332, 478.
powder. Directions for cultivating pyrethrum for, 1996.
Persian, 1485.
powders and their use, 1692.
ravages, 1464.
Trade in, 1986.
world, 1466, 1467.
Figuier's (review), 408.
Remarkable peculiarity in the, 622.
Insecticide. London purple as an, 1725.
Oxeye daisy as an, 1861.
Pyrethrum an important, 2131.
its use as an, 2119.
Use of naphthaline as an, 2274.
Paris green as an, 1497.
Insecticides. Emulsions of petroleum as, 2134.
and their value as, 2126, 2200.
on garden insects, Alwood, W. B. Tests with, 2382.
upon insects affecting garden crops. Experiments with, 2344.
Quelques mots sur les, 2283.
Two valuable, 1743.
Insectivorous plants. Food of, 1499.
Insects attracted to light, 178, 2352.
Bill providing for the extermination of, 1842.
Birds *vs.*, 199, 369.
Bluebirds feeding on parasitic and predaceous, 1885.
in California. Injurious, 2074.
Californian orange, 2373.
Catalogues and monographs of, 1765.
Centennial, 1511, 1611.
clustered on apple-trees, 1263.
collecting and preserving, 881, 1057.
Comstock's classification of, 2390.
Damage to silver plate by, 2154.
Death of mules caused by, 1811.
is directed. How flight in, 1891.
Directions for collecting and preserving, 881.
rearing, 14.
and drought, 2100.
effects of severe cold on, 1818.
enemies of fruit and fruit-trees. Review of Trimble's, 187.
in northern Illinois. Six worst, 377.
the honey-bee, 1059.
rice-plant, 1949.
feeding on sap of black-walnut, 1195.
in the flower garden, 936.
Insects as food for man, 2166.
found on apple-trees, 731.
Fungus diseases of beneficial, 1813.
Harmless, 1526.
Imported, 140.
plants and, 1339.
Improved method of spraying trees for protection against, 2211.
Injurious, 126.
injurious to agriculture. Legislation in regard to, 1468.
New, 2055.
cereals and forage crops, 2238.
cotton in Brazil, 2277.
field crops, 2238.
fruit and fruit trees, 2238.
trees, 16, 31.
garden vegetables, 2238.
grape-vine, 267, 1081, 1086, 1091, 1102, 1118, 1127, 1130, 1158, 1175, 1202, 1221, 1255, 1281, 1301, 1311, 1329, 1363.
live-stock, 2238.
orange in Brazil, 2277.
sugar-cane in Brazil, 2277.
vegetation. Review of Harris's, 568.
in Illinois, 6, 52.
Legislation to control, 1946.
the vine, 2238.
of interest to fruit-growers.
Introduction and spread of scale, 2232.
by malodorants. Repelling, 2091.
Maple-tree, 2279.
Mind how you pack your, 435.
most destructive to the orange. Successful management of the, 2088.
named, 163, 200, 316, 358, 359, 413, 447, 463, 490, 540, 560, 562, 582, 631, 673, 714, 721, 736, 743, 746, 785, 789, 805, 832, 847, 849, 858, 1140, 1147, 1183, 1226, 1273, 1287.
to be named, 488, 514, 598.
in the National Museum. The collection of, 2299.
Report on the collection of, 2282, 2330, 2368.
and native American insects. Imported, 1115, 1127.
Nervous system of, 2225.
Notes on our commoner, 1802.
on the oleander, 730.
in the orchard. Review of Houghton's, 183.
Packard, A. S. Larvæ of injurious forest, 2267.
Notes on forest, 2253.
Number of segments in the head of winged, 2267.
around peach-trees, 660.
Pitcher-plant, 1385.

Insects. Poisoning noxious, 205.
Poisonous, 2399.
Popular remedies for noxious, 73.
Preserving, 881, 1057.
Regulation of sex in, 1415.
in relation to agriculture, 2238.
Remedies for various, 2284.
Retarded development of, 2040.
Salt and vinegar for, 937.
Simulium feeding on other, 2177.
Some interesting, 1232.
Stings of, 116.
from stomach of lark, robin, and sunfish, 1926.
rock-bass, 1792.
stripping the burr-oak, 966.
in timber, 918.
Trade in, 1986.
Transformation of, 528.
Unity in coloration of, 50.
Use of buckwheat to destroy, 1744.
fungus growths to destroy, 1918.
poisons to destroy, 1887.
used as food. Salt-water, 2203.
White willow, 907.
of the year, 2289, 2331.
Destructive, 2322.
Insekten. Einige unserer schädlicherer, 1325.
Insidious flower-bug, 1127, 1423, 2418.
Instinct of Cicada septendecim, 2144.
Instructions to agents of the U. S. Entomological Commission. Supplementary, 1888.
Interaction of organisms, 139, 1954.
Interest felt in economic entomology in California, 2053.
Interim committees. *Ad*, 394.
Intermittance of phosphorescence in fire-flies, 1805.
Internal mite in fowls, 2157.
Introduction of Phylloxera. Laws to prevent the, 2019.
Invigorator again. Best's fruit-tree, 530.
once more. Best's, 545.
Io moth, 1329, 1389.
caterpillar, 809.
Iowa. Economic entomology in, 2197.
The hopper in, 1585.
Osborn, H. Report upon the insects of the season in, 2418.
The seventeen-year Cicada in, 1737.
Ipomæa commutata. Aletia feeding, 2343.
Ips in calyx of pear. Banded, 1239.
fasciatus, 4, 214, 1239.
4-signatus = I. fasciatus.
Isabella tiger-moth, 1311.
Isosoma, 2394.
allynii, 2060, 2063.
grande *n. sp.*, 2288, 2291, 2316, 2348, 2363, 2394.
Habits of. 2348.
hordei, 563, 923, 2060, 2238, 2316, 2394.
Larger wheat-straw, 2291.
lineare, 2060, 2119.
nigrum = I. hordei.
tritici *n. sp.*, 2060, 2063, 2119, 2123, 2316, 2363, 2394.
Isosoma vitis, 482, 1059, 1127.
Wheat, 2119.
straw, 2291, 2394.
Ithycerus noveboracensis, 16, 306, 652, 659, 869, 1033, 1085, 1188, 1301.
Iulus, 430.
cœruleo-cinctus, 236.
marginatus = Spirobolus marginatus.
infested with Gamasus juloides, 963.
multistriatus *n. sp.*, 193 = Cambala annulata.
virgatus, 261.
Ixodes bovis, 404.
sp., 834.
unipunctata, 1133.
Jaeger's North American insects, 84.
Japanese mode of packing silk-worm eggs, 1616.
Jarring down infested fruit. Codling-moth, 1318.
Jassidæ, 737.
Jassus, 1766.
sexnotatus, 1766.
Jiggers, 412.
Johnson, L. Report on cotton-worm, boll-worm, and other insects, 2164.
Joint-worm, 49, 62, 563, 923, 2238.
Appendix to article on, 1223.
fly, 1127.
Joint-worms, 2119, 2394.
Notes on, 2316.
Joints of wheat. Worm in, 1848.
Jones, R. W. Observations and experiments on cotton-worm, 2164.
Report on cotton insects, 2343.
W. J. Report on cotton insects, 2343.
Joppidium *n. g.*, 385.
ruficeps *n. sp.*, 385.
Journal of a State entomologist. One day's, 383.
Jumping to conclusions, 253.
seeds and galls, 1496, 2163, 2173.
spiders, 2302.
sumach-beetle, 1363.
tree-cricket, 1329.
Juniper. Dapsilia rutilans on, 1713, 1721.
web-worm, 1721.
Junipers. Insects injurious to, 1713.
Juniperus sabina. Insects injurious to, 698.
Junonia lavinia, 753.
Kansas bombardier-beetle, 1311.
The locust in, 1591.
and Missouri this fall. No locust injury in, 1433.
Report on grasshopper question to the governor of, 1573.
Scorpion in, 1119.
Silk culture in, 1542.
Kartoffel-Käfer. Neue, 919.
Katydid. Angular-winged, 1363.
Broad-winged, 1329, 1363.
Domesticated, 1536.
Eggs of the, 516, 1005.
angular, 1518.
oblong, 569.
Narrow-winged, 1363.
Oblong-winged, 1329, 1363.
See Catydid.
Katydids, 1363.

- Kentucky. Coleopterous cave fauna of, 2033.
- Kermes galliformis *n. sp.*, 1972.
- Kerosene emulsion, 2291.
  - as a means against cotton insects, 2164.
    - orange insects, 2164.
- Kiesenwetter. Obituary, 1819.
- Killer. Cottonwood, 1654.
- Killers. Bee, 1543.
- Killing apple-worms by machinery, 769.
- Kingdom. Animal, 393.
- Klippart's wheat plant (review), 186.
- Knot once more. Black, 930.
- Knots on apple-tree roots caused by root-lice, 1187.
- Knotweed geometer, 1059.
  - Hæmatopis grataria on, 1059.
- Knowledge useless? Is any, 1135.
- Koebele, A. Experiments on cottony cushion-scale, 2394.
    - the red scale, 2394.
  - Notes on locusts about Folsom, Cal., 2363.
  - Report of experiments against scale insects, 2418.
- Koeppen, F. T. Account of the Hessian-fly, 2267.
- Labena. Useful, 1423.
- Labia, 2267.
- Lac insects, 2119
- Lace-wing fly, 533, 1423.
- Lace-wing larva, 1059.
  - Weeping, 1127.
- Lachnosterna fusca, 3, 54, 68, 300, 332, 410, 478, 500, 594, 640, 865, 1020, 1059, 1064, 1072, 1307, 1313, 1329, 1436, 1440, 1522, 1803, 1812, 2238, 2394.
  - pilosicollis = L. tristis.
  - quercina = L. fusca.
  - quercus, 372.
  - tristis, 966.
- Lachnus caryæ, 27.
  - plantanicola *n. sp.*, 2138.
  - strobi, 265, 320, 1039.
- Lackey moth. American, 1301.
- Lacordaire, J. T. Death of, 1285.
- Ladder spider, 1299.
- Lady-bird. Ashy-gray, 2119.
  - Blood-red, 2119.
  - Cactus, 2119.
  - Fifteen-spotted, 959, 1311.
  - Icy, 1311.
  - and its larva. Northern, 1289.
  - Spotted, 599.
  - Twice-stabbed, 38, 1883.
- Lady-birds, 1059, 1127, 1423, 1558, 2119.
  - Swarms of, 824.
- Lafayette, Ind., Webster, F. M. Experiments at, 2344.
- Lagoa opercularis, 145, 796, 1748.
- Lake Superior. Simulium from, 2032.
- Lamellicornia, 1440.
- Lampronota, 1878.
  - amphimilæna *n. sp.*, 385.
  - breviventris *n. sp.*, 385.
  - imitatrix *n. sp.*, 385.
  - interpellata *n. sp.*, 385.
  - pictiventris *n. sp.*, 385.
- Lampyridæ, 1705, 1805, 2036.
  - Revision of the, 1819.
- Lampyris noctiluca, 1097, 1917.
- Laphria thoracica = Dasyllis thoracica.
- Laphygma autumnalis = L. frugiperda.
  - frugiperda, 1127, 1256, 1267, 1282, 1301, 1400, 2011, 2343.
  - fulvosa *n. v.*, 1301 = var. of L. frugiperda.
  - obscura, *n. v.*, 1301 = var. of L. frugiperda.
- Laporte. Obituary, 1817.
- Lappet caterpillars on the apple, 972.
    - apple-trees, 812.
- Larch. Nematus erichsoni on, 2232.
  - saw-fly, 2232.
- Large Asilus fly, 1269.
  - black potato-beetles, 1206.
  - compound gall on grape-vine, 720.
  - dragon-fly, 759.
  - fish-fly, 712, 903.
  - gray straight-horned snout-beetle, 1033.
  - green caterpillars on the apple, 1076.
    - worms in a peach, 661.
  - moth on apple-trees, 1028.
  - phosphorescent larva, 1874.
  - saw-fly, 1514.
  - silken cocoon, 604.
  - water-beetle, 750, 816.
  - white-scale on Acacias, 1730.
  - willow-worm, 1380.
  - worm on apple-trees, 1048.
- Larger cabbage-butterfly, 2232.
  - wheat-straw Isosoma, 2291.
- Lark. Insect from stomach of a, 1926.
- Larva boring along the axis of apple twig, 1850.
  - injurious to cotton squares. Butterfly, 1872.
  - Large phosphorescent, 1874.
  - Moth issuing from a, 1779.
- Larvæ. Aquatic, 1851.
  - Habits of, 346.
  - in the human bowels, 382.
  - of injurious forest insects, 2267.
  - named, 1264.
  - Preserving, 1300.
  - in stomach of black-bass, 1792.
      - blue-bird, 1871.
- Larval characteristics of Corydalus and Chauliodes, 1652.
  - characters and habits of blister-beetles, 1600.
      - Epicauta, 1600.
      - Macrobasis, 1600.
  - habits of bee-flies. Bombylidæ, 1947, 1970.
    - Dexidæ, 2260.
    - Epicauta and Henous, 1387.
    - Sphenophori that attack corn, 2030.
  - life as influenced by food. Number of molts and length of, 2167.
  - stages and habits of bee-fly. Hirmoneura, 2169.
- Larviform females in the Phengodini. Luminous, 2397, 2402.
- Lasius latipes, 27.
- Lasioderma serricorne, 551.
- Lasioptera vitis, 720, 1329.

Law. Carrying out the, 1993.
Lawn. Beetles swarming about, 718.
Laws to prevent the introduction of Phylloxera, 2019.
Leaf-beetle. Streaked cottonwood, 2291.
bug. Ash gray, 1127, 1423.
bugs, 400.
crumpler. Apple, 574, 1580.
in Georgia. Rascal, 1962.
Rascal, 341, 373, 1311.
folder. Cranberry, 2291.
Grape, 1301, 1579.
galls and caterpillars on sugar berry, 762.
on the grape-vine, 1716.
hopper, 36.
injurious to small grains. A new, 1767.
hoppers, 2362.
on celery, 452.
of the grape, 399.
Grape-vine, 484.
injuring wheat, 1766.
miner on white-oak, 1879.
miners of the locust, 451.
roller. Strawberry, 1574.
rollers. Descriptions of new, 1969.
tyer. The green, 1311.
Leafy oak-gall, 774.
Leather-beetle, 2363.
Lebia grandis, 365, 1218.
Great, 1301.
Lecanium, 1.
acericola *n. sp.*, 389 = Pulvinaria innumerabilis.
macluræ *n. sp.*, 389 = Pulvinaria innumerabilis.
oleæ, 1303.
rosæ = L. oleæ.
sp. on blackberry, 117.
china-tree, 1964.
magnolia, 1377.
plum, 107.
sugar-maple, 1004.
vitis = Pulvinaria vitis.
Leconte, J. L. Death of, 2246.
Tribute to the memory of, 2264.
Leconte's pine-worm, 1570.
Lederer, J. Death of, 1285.
Le Duc, W. G. Letter to, 1684.
Legged maple-borer, 1363.
Legislation to control insects injurious to vegetation, 1946.
in regard to insects injurious to agriculture, 1468.
Lema trilineata, 119, 126, 135, 136, 138, 185, 401, 565, 925, 1059, 1328, 1558, 1593.
Length of larval life as influenced by food. Number of molts and, 2167.
the thread of the silk-worm, 1359.
Leopard moth. Great, 1311.
Lepidium *vs.* bed-bugs, 1741.
Lepidoptera, 1329, 2267, 2340.
Hudson Bay, 1985.
Migrations of, 1770.
New lists of North American, 2132.
Notes on South American, 1784.
Lepidoptera of the Outer Hebrides, 2058.
Lepidopterological notes, 1999, 2013, 2160.
Lepidopteron. A myrmecophilous, 2214.
Lepidopterous case-bearer, 260.
larvæ. Dried leaves as food for, 2159.
Fleas feeding on, 2110.
Remarkable, 40.
Lepidosaphidæ, 1301.
Lepiopomus pallidus. Insects from the stomach of, 1792.
Leptobatus illinoiensis *n. sp.*, 385 = Exetastes illinoiensis.
Leptostylus aculiferus, 673.
Leptura capitata, 200.
Leptus americanus *n. sp.*, 1326 = Tetranychus americanus.
irritans *n. sp.*, 1326 = Tetranychus irritans.
Lesser apple-leaf folder, 1311.
locust, 2363.
migratory locust, 2232.
pine-borer, 2267.
Prionus, 2267.
Lestes inæqualis *n. sp.*, 24.
Leucania albilinea, 1507, 1570, 1610.
unipuncta, 6, 7, 8, 9, 10, 11, 12, 17, 52, 328, 647, 670, 879, 906, 1127, 1267, 1282, 1400, 1442, 1482, 1484, 1551, 1570, 1670, 1800, 1835, 1856, 1877, 1885, 1886, 1953, 2001, 2009, 2086, 2087, 2090, 2119, 2122, 2235, 2239, 2253, 2262, 2267, 2343.
Additional notes on, 2001.
Complete life-history of, 1670.
Hibernation, 7, 8, 2086.
Parasites of, 6, 10, 17, 1670.
Leucopis, 154, 160, 174, 1530.
Phylloxera, 2150.
Libellulidæ, 1707, 1709.
Library pest. Croton bug as a, 1717.
Lice on calves, 889.
horses, 258.
pigs, 900.
snow-balls, 1184.
Lichtenstein, J. Obituary, 2370.
Lichtenstein's theory as to dimorphic asexual females, 2072.
Life. Tenacity of, 1755.
Light. Insects attracted to, 178, 2352.
Lightning-hopper. Frosted, 1329.
hoppers, 737.
Lignified snake of Brazil, 2136.
Lignivorous. Rhyssa not, 2286.
Ligyrus relictus, 3, 54, 68, 1440.
rugiceps, 1794, 2080.
Lilac-borer, 844.
LILAC. INSECTS AFFECTING.
Ægeria syringæ = Podosesia syringæ.
Podosesia syringæ, 844.
Limacodes, 847, 1150.
hyalinus *n. sp.*, 40 = Phobotron hyalinum.
pithecium = Phobetron pithecium.
scapha, 40.

Limacodes tetradactylus *n. sp.*, 40.
Limenitis disippus, 613, 1193, 1217, 1301, 1305, 1306, 1340.
  ursula, 145, 1217, 1305, 1306, 1340.
Limneria fugitiva, 413, 1311.
  lophyri *n. sp.*, 1570.
  pallipes, 2378.
Limnophilus, 2267.
Lina lapponica, 1834.
  populi, 1834.
  scripta, 1654, 1834, 2291.
  tremulæ, 1834.
Linden and ash destroyers, 1849.
LINDEN. INSECTS AFFECTING.
  Hyphantria cunea, 1849.
    textor = H. cunea.
  Odontota rubra, 1849.
Linoceras junceus, 543; 1827.
L'insectologie agricole, (review), 506, 568.
Lintner's first report, 2244, 2254.
Linum. Acrididæ that eat, 1645.
Lissorhoptrus simplex, 273, 1911, 1973, 2119.
Listotrophus cingulatus, 805.
Lithocolletis cincinnatiella, 1879.
  guttifinitella. Mandible of, 1934.
Lithophane antennata, 1182.
  cinerea, 1301.
Little Cicada, 1242.
  known facts about well-known animals, 2071.
  Turk and its crescent, 329.
Live-stock. Insects injurious to, 2238.
Lives. Two useful, 2370.
Lixus. Larval habits of, 2404.
  macer, 2404.
  parcus on Amelanchier, 2404.
Lobesia botrana = Eudemis botrana.
Loco weed. Walshia amorphella bred from, 1127, 2356.
Locomotion. Insect, 1955.
Locust, 2366.
  Ash-colored, 2363.
  Atlantic migratory, 1423, 1625.
  borer, 921, 1121, 1196, 1288.
    Hickory *vs.*, 1516.
  borers, 37, 472.
  Bruner, L. Observations in the Northwest on the Rocky Mountain, 2165.
  California migratory, 2363.
  Californian, 1959.
  Devastating, 2363.
  Differential, 1423, 2363.
  eggs, 1548.
    in Asia Minor. Bombylid larvæ destroying, 2118.
    Condition of, 1567.
    Experiments with, 1572.
  Expected advent of the, 2307.
  experience, 1617.
  flights, 1590.
    in Dakota, 2007.
    east of the Mississippi, 1549, 1613.
  Geographical distribution of the Rocky Mountain, 2267.
  or grasshopper. Governors of Western States on the Rocky Mountain, 1557.
Locust, important observations on the Rocky Mountain, 1571.
  injuries. New method of counteracting, 2335.
  injury in Kansas and Missouri this fall, 1433.
    the near future. Probabilities of, 2355.
  injury next spring, 1555.
    summer. Anticipated, 1615.
LOCUST. INSECTS AFFECTING.
  Arhopalus robiniæ = Cyllene robiniæ.
  Cossus robiniæ, 37, 1121.
  Clytus robiniæ = Cyllene robiniæ.
  Cyllene robiniæ, 37, 472, 827, 921, 1196, 1250, 1288, 1516.
  Hispa scutellaris = Odontota dorsalis.
  Nitidulidæ, 37.
  Odontota dorsalis, 451.
  Spermophagus robiniæ, 1026, 1474.
  Xyleutes robiniæ = Cossus robiniæ.
Locust invasion with the occurrence of drought. Connection of, 1422.
  Leaf miners of the, 451.
  Lecture on the Rocky Mountain, 1493.
  Lesser migratory, 2232, 2363.
  mite, 1423, 1625, 1643, 1959.
  in Montana in 1880, Bruner, L. Rocky Mountain, 2267.
  multiplication and migration, Swinton, A. H. Solar physics and earthquake commotion applied to, 2267.
  Natural history of the Rocky Mountain, 1578.
  notes. Miscellaneous, 2267.
  in 1876, 1521.
    1880, Martin, J. Rocky Mountain, 2267.
    1885, Bruner, L. Abundance of the Rocky Mountain, 2363.
  and other insects in the Northwest during the summer of 1883, Bruner, L. Observations on the Rocky Mountain, 2277.
  Packard, A. S. Development of the, 2267.
  The periodical Cicada alias the seventeen-year and the thirteen-year, 1159.
  pest, 1501.
  Philosophy of the movements of the Rocky Mountain, 1669.
  plague, 1473.
    in the United States, 1625.
  probabilities for 1882, 2057.
  prospects, 1527, 1562, 1582.
    in southwest Missouri this fall, 1596.
  ravages in California, 1959.
    1880 and 1881. Chronology of, 2267.
  Red-legged, 2363, 1423, 1625.
  report to governor of Kansas, 1573.
  Rocky Mountain, 1423, 1451, 1452, 1482, 1538, 1557, 1570, 1625, 1643, 1959, 2267, 2291.
  scourge. Rocky Mountain, 1629.
  seed-weevil. Honey, 1026.
  Seventeen-year, 370, 884, 1489.
  swarms that devastate the trans-Mississippi country, 1674.
  theory wanted. New, 1532.

Locust. Two-striped, 1423, 2363.
    weevil. Honey, 1474.
    in Wyoming, Montana, etc., in 1881, Bruner, L. The Rocky Mountain, 2267.
    Yellow, 2363.
Locustidæ, 929, 1453.
Locusts, 926, 1349, 1363, 2418.
    again, 1550.
    Bruner, L. List of North American, 2267.
    Changes in vegetation caused by, 1495.
    in Dardanelles. Sarcophaga lineata destructive to, 2075.
    Destruction of young or unfledged, 1577.
    Destructive, 2363.
    Dimorphism of, 1889.
    Ditching for young, 1488.
    eat the castor-bean, 1645.
    about Folsom, Cal., Koebele, A. Notes on, 2363.
    as food for man, 1481.
    Grasshoppers and, 26, 147, 929.
    Habits of young or unfledged, 1578.
    hatching? Are the, 1566.
        Mistaken identity. Are the, 1593.
    How to destroy, 1446.
    in Illinois. Flying, 1437, 1443.
    in Kansas, 1591.
    Literature of destructive, 1959.
    and locusts, 1994.
    in Nevada, 2024.
    New remedy against destructive, 2328.
    next spring. Injury by, 1555.
    Notes on, 1456.
    1880. Chipman, A. J. Notes on, 2267.
    Prairie fires and hateful, 1453.
    Professor Riley and the, 1434.
    of San Joaquin Valley, Cal. Coquillett, D. W. Report on the, 2363.
    sting? Do, 371.
    in Texas in spring of 1886, Bruner, L. Report on, 2382.
    in the West, 2044.
    and the Western cricket, Bruner, L. Notes on other, 2267.
    in western Missouri. Ravages of young, 1492.
Loew, H. Description of the rye gall-gnat, 2267.
Lombardy poplars. Caterpillars on, 571.
London purple as an insecticide, 1725.
    and Paris green, 2021.
Long-horned Diabrotica, 1905.
    legs. Grand-daddy, 838.
    sting. Delicate, 1329.
    tailed Ophion, 1311.
Longicorn beetles. Food of, 1902.
    borers, 95.
Longicorns in pine and cedar, 319.
Longitarsus, 636.
Look out for the eggs of the apple-tree plant-louse, 507.
Lopha 4-maculata = Bembidium 4-maculatum.
Lophyrus abbotii, 465, 927, 956, 1057, 1570.
    abietis, 115.
    lecontei, 985, 1011, 1057, 1570.
Louisiana. Destructive cricket in, 2384.
Lozotænia rosaceana = Cacœcia rosaceana.
Lubber grasshopper, 2119.
Lucanus dama, 784.
    elaphus, 305, 755, 957, 1517.
Lucidota atra, 358.
Lucilia macellaria, 209, 1880, 1921, 2158, 2199, 2255.
Ludius attenuatus, 224.
Lumbricus, 1304.
Luminosity of fire-flies, 1840.
Luminous larviform females of Phengodini, 2397, 2402.
Luna moth, 776.
    silk-worm, 1311.
Lungs. Larva of Scenopinus from human, 1348.
Luperus brunneus, 1799.
    morulus, 1799.
    noxius = L. brunneus.
Lure for moths, 1695.
Lyda *sp.*, 656.
Lydella doryphoræ *n. sp.*, 1059 = Exorista doryphoræ.
Lygus lineolaris = L. pratensis.
    pratensis, 2, 31, 76, 682, 1127, 1213, 1219, 2235, 2291, 2363.
Lymexylidæ, 575.
Lymexylon navale, 575, 1135.
Lytta ænea = Pomphopœa ænea.
    atrata = Epicauta pennsylvanica.
    cinerea = Macrobasis unicolor.
    fabricii = Macrobasis unicolor.
    marginata = Epicauta cinerea.
    murina = Macrobasis unicolor.
    sayi = Pomphopœa sayi.
    tarsalis = Pomphopœa tarsalis.
    vittata = Epicauta vittata.
Machine. A satisfactory grasshopper, 1592.
Machinery for destroying the cotton-worm, Barnard, W. S. Tests of, 2253.
    Killing apple-worms by, 769.
McLain, N. W. Apicultural experiments, 2382.
    Experiments in apiculture, 2394.
    Report on experiments in apiculture, 2363.
Maclura aurantiaca as food for Sericaria, 2234.
    Silk-worms fed on, 1341, 1542, 1609.
McMurtrie, W. Tests of silk-fiber from cocoons raised at the Department, 2253.
Macrobasis, 1600, 1643, 1651, 2238.
    albida, 1796.
Macrobasis, Larval characters and habits, 1602.
    murina = M. unicolor.
    unicolor, 38, 134, 185, 347, 362, 401, 470, 736, 912, 1044, 1209, 1558, 2248.
Macrocentrus delicatus, 1334.
Macrodactylus subspinosus, 249, 361, 373, 565, 748, 1075, 1278, 1329, 1357, 1375, 1478, 1583, 2248.
Macrogomphus? spiniceps *n. sp.*, 24.
Macromia flavipennis *n. sp.*, 24.
    illinoiensis *n. sp.*, 24.
Macronema zebratum, 372.
Macrosila carolina = Protoparce carolina.
    cluentius, 1784.
    5-maculatus = Protoparce celeus.
    rustica = Protoparce rustica.

Mad. Entomology indeed run, 227, 1224.
Madarus ampelopsidos = Ampeloglypter ater.
vitis *n. sp.*, 1059 = Ampeloglypter sesostris.
Madras. Coffee-borer in, 498.
Maeklin, F. W. Obituary, 2161.
Maggots in sauce, 1607.
Magnolia. Lecanium on, 1277.
Scale-insect on, 1377.
Maia moth, 1329.
Mails. Queen bees in the, 1762.
Maine. New potato-bug in, 119.
MAIZE. INSECTS AFFECTING, 2119.
Achatodes zeæ, 1927.
Agrotidæ, 1522.
Elateridæ, 1522.
Lachnosterna fusca, 1522.
quercina = L. fusca.
Malaria. Mosquitoes *vs.*, 2162.
Mallodon melanopus, 2291.
Mallophaga, 258, 497.
Mallophora orcina, 1959.
Malodorants. Repelling insects by, 2091.
Malva sylvestris. Erynnis alceæ boring in stems of, 1602.
Mamestra, 2238.
Cabbage, 2232.
chenopodi = M. trifolii.
picta, 179, 1056, 1127, 2232.
subjuncta, 2291.
trifolii, 229, 281, 2232.
Man. Effect of Paris green on, 1427.
Insects as food for, 2166.
Locusts as food for, 1481.
Mantidæ, 2267.
Mantis, 2267.
carolina = Phasmomantis carolina.
Preying, 457.
or rear-horse. Eggs of, 1060.
Supposed eggs of preying, 1002.
Mantispa, 2267.
brunnea, 1243.
Mantispian. Brown, 1243.
Many-banded robber, 1059, 1423.
Maple-bark lice, 1004.
louse, 344.
Beetle on sugar, 1014.
borer. Legged, 1363.
A new (?) ægerian, 1360.
Eggs on sugar, 350.
Maple Galls on leaves of soft, 445.
MAPLE. INSECTS AFFECTING.
Acarus aceris-crumena, 1265.
Acronycta americana, 841.
Ægeria acerni, 743, 1063, 1360, 1363.
Anisota rubicunda = Dryocampa rubicunda.
Arachnid, 445.
Attacus cecropia, 841.
Catydid, 665.
Ceratocampa imperialis = Eacles imperialis.
Chrysobothris femorata, 1250.
Clisiocampa americana, 350.
Clytus speciosus = Plagionotus speciosus.
Coccid, 344.
Dryocampa rubicunda, 841, 915, 1329.
Eacles imperialis, 1268.
MAPLE. INSECTS AFFECTING—Continued.
Eburia 4-geminata, 1014.
Lecanium acericola = Pulvinaria innumerabilis.
sp., 1004.
Orgyia antiqua, 1797.
Plagionotus speciosus, 915.
Pseudococus aceris, 1890.
Pulvinaria innumerabilis, 1515, 1816, 2279.
Sciara ocellaris, 2119.
Telea polyphemus, 841.
Trochilium acericolum = Ægeria acerni.
acerni = Ægeria acerni.
Maple. Mite-gall on sugar, 1265.
Ocellate leaf-gall of the red, 2119.
scale. Cottony, 1816, 2291.
Scale insect on, 1890.
tree insects, 2279.
twigs. Rows of eggs on, 665.
worm. Green striped, 1329.
worms, 841.
Maples. Cottony scale on, 1515.
Flat-headed borer in soft, 1250.
Mare's nest. Finding a, 86.
Margined blister-beetle, 1059, 1558.
Martin, J. Report on the Rocky Mountain locust, 1959.
Report on the Rocky Mountain locust in 1880, 2267.
Mary Chalcis-fly, 1311.
Masicera archippivora *n. sp.*, 1301.
Mason-bee cells. Remarkable new genus of Meloidæ infesting, 1601.
Mass of eggs, 240.
mistakes, 234.
Massachusetts. Periodical Cicada in, 2321.
southeastern, 2216.
Massospora cicadina infesting Cicada, 1809, 2112.
May-beetle, 300, 865, 1020.
Egg of the common, 1329.
beetles swarming in Alabama, 1812.
fly, 283.
Meadow enemy, 1368.
lark. Beetles in stomach of, 1013.
worms, 947.
Meal sack. Worm infesting, 1896.
worms, 191.
Mealy bugs. Structure of, 2119.
Measuring-worms, 75.
Megastizus brevipennis, 375.
Megathymus coloradensis *n. var.*, 1602.
yuccæ, 1420, 1465, 1482, 1570, 1602.
Additional notes, 1602.
Note on, 1465.
Megatoma serra, 1352.
Megilla maculata, 6, 94, 188, 599.
Food-habits of, 2145.
Melampsalta parvula, 1242.
Melancholy chafer, 522.
in apples, 842.
Melanactes, 1874.
Melanippe montanata, 2224.
Melanolestes picipes, 314, 1253.
Melanophila sp., 2267.
Melanophora ? diabroticæ, 2260.

Melanoplus atlanis = Caloptenus atlanis.
    destructor = Caloptenus destructor.
    devastator = Caloptenus devastator.
Melanotus communis, 351, 358.
    incertus, 40, 846.
Melasoma lapponicum = Lina lapponica.
    populi = Lina populi.
    scriptum = Lina scripta.
    tremulæ = Lina tremulæ.
Melissopus *n. g.*, 1969.
    aurichalceana *n. sp.*, 1969
    latiferreana, 1969.
Melittia ceto, 125, 126, 248, 377, 1083.
    gloriosa 2410.
Meloe, 1500, 1600, 2267.
    angusticollis, 1387.
    barbarus, 1600.
    proscarabæus, 2083.
Meloidæ, 912, 1230, 1396, 1600, 1601, 1651, 1858, 2002, 2072, 2118, 2267.
    Fire cure for, 121.
    Hypermetamorphoses of, 2191.
    infesting potato, 48.
    Means against, 794.
    Remarkable genus of, 1601.
    Remarks on, 1600.
    Triungulin of, 2082.
Meloini, 1601.
Melolontha philophaga = Lachnosterna fusca.
Melon. Bug on, 897.
    bugs. Satisfactory remedy for, 2236.
    Diabrotica vittata on, 897, 2236, 2238.
Membracidæ, 737.
Membracis ampelopsidis, 1183.
Memoriam B. D. Walsh. In, 1098.
Meracantha contracta, 1871.
Merinus lævis, 1153.
Merisus destructor, 1581, 2332.
    subapterus *n. sp.*, 2332.
Mermis, 2363.
Meromyza, 1461.
    americana, 727, 1058, 1059, 1506, 1589, 1848, 1875, 2291, 2394.
Mesochorus. Glassy, 1127.
    vitreus *n. sp.*, 6, 1670.
Mesoleius, 385.
Metamymar *n. g.*, 2343.
    aleurodis *n. sp.*, 2343.
Metapodius femoratus, 373, 775.
    nasulus = M. femoratus.
Meteorus hyphantriæ *n. sp.*, 2378, 2394.
Methods of destroying scale-insects, 2119.
Mexican honey-ants. Peculiarities of, 1417.
Mexico. Report on cotton crop and its enemies in, 2343.
Mezium americanum, 2346.
Michigan apples and codling-moth, 1677.
Microcentrum retinervis, 241, 247, 1363, 1518, 1536, 2276.
Microdon globosus, 1789.
Microgaster, 77, 158, 183, 490, 662, 679, 717, 851, 1217, 1290.
    Disippus, 1301.
    gelechiæ *n. sp.*, 1059.
    Life-habits of, 64.
    limenitidis *n. sp.*, 1301 = Apanteles limenitidis.
Microgaster, Military, 1127.
    Notes on North American, 1960.
    parasitic on Protoparce celeus, 155, 1264.
    sp. parasitic on Thecla (poes?), 1872.
Microgasters. Notes on, 2097.
Microlepidoptera. Works on North American, 1975.
Microplitis actnosus, 1125, 1134.
    ceratomiæ *n. sp.*, 1125, 1134, 1960.
    gortynæ *n. sp.*, 1960.
Micropterus salmoides. Larvæ in stomach of, 1792.
Micropus leucopterus = Blissus leucopterus.
Midas fulvipes *n. sp.*, 40.
Midge, 167.
    Clover-seed, 2291.
    Pear, 2363.
    Wheat, 109, 110, 142, 216, 280, 292, 428, 711, 1512, 2238, 2291, 2363.
Migration of butterflies, 1770, 1991.
    and hibernation of Aletia argillacea, 1689.
    of plant-lice from one plant to another, 2017.
Migratory butterflies, 1622, 1635.
    locust. Atlantic, 1423.
        Lesser, 2232.
Military Microgaster, 1127.
Milkweed. Danais archippus on, 1535.
    weevil, 711.
Million dollars. That hundred and fifty, 1647.
    Plums for the, 501.
Mills. The same in flouring. 1261.
Milyas cinctus, 777, 1294, 1431, 1450, 1672, 2048.
Mimicry and protective resemblances, 1301, 1340.
Mind how you pack your insects, 435.
Minings on apple-twigs. Galls and, 552.
Minneapolis. Entomology at, 2212.
Minnesota. A State entomologist for, 1108.
Minot, C. S. Anatomy of Aletia, 2343.
Minute borers in cherry, peach, and plum trees, 1940.
Miscellaneous, 735.
Miscellaneous notes on orange insects, 2164.
Misnamed gall-moth, 1127.
Mississippi country. The locust swarms that devastate the trans, 1674.
    Description of Aphididæ from west of the, 1678.
    floods. One effect of the, 2080.
    Locust flights east of the, 1549, 1613.
    valley. The Buffalo-gnat problem in the lower, 2416.
Missouri. Ailanthus silk-worm in, 1460.
    bee-killer, 1127.
    entomological reports, 1680.
        Noctuidæ in the, 2069.
    Entomology in, 1361.
    this fall. Locust prospects in southwest, 1596.
        No locust injury in Kansas and, 1433.
    Murtfeldt, M. E. Notes from, 2291.

Missouri. Murtfeldt, M. E. Notes for 1886 from, 2382.
    Oyster-shell bark-louse in, 1169.
    Ravages of young locusts in western, 1492.
    Report State entomologist of, 1, 1059.
        2, 1127.
        3, 1301.
        4, 1311.
        5, 1329.
        6, 1363.
        7, 1423.
        8, 1482.
        9, 1570.
        Index, 2026.
    State Horticultural Society. Report committee on entomology, 1113, 1127.
    Supposed bark-lice eggs in, 1084.
Mistaken identity, 1593.
Mistakes. A mass of, 234.
Mite. On an extensile penetrating organ in a gamasid, 1626.
    in fowls. Internal, 2157.
    gall on sugar-maple, 1265.
    Locust, 1423, 1625, 1643, 1959.
    parasites of the Colorado potato-beetle, 1505.
    Phylloxera, 1363.
    Red, 1959.
    Scarlet, 1470.
    Silky, 1423, 1625.
    transformations, 1618.
Mites, 356.
    Cannibal, 624.
    Classification of, 1992.
    Descriptions of new subterranean, 1370.
    Egg-infesting, 1637.
    on grasshoppers, 146.
    mistaken for plant-lice, 59.
    parasitic on beetles, 315.
    Transformations of the red, 1632.
Mniszech, G. V. Obituary, 2054.
Mold and Phylloxera, 1807.
Mole crickets, 1270.
Molts and length of larval life as influenced by food. Number of, 2167.
Monell, J. Notes on Aphididæ, 1678.
Monocesta coryli, 1721.
Monocrepidius vespertinus, 351.
Monographs again, 1765, 1828.
Monohammus titillator, 1324.
Monophadnus rubi, 663, 761, 1212, 1641.
Monostegia rosæ, 672, 984, 1780.
Monstrosities. Rare, 2224.
Montana in 1880, Bruner, L. The Rocky Mountain locust in, 2267.
    1881, Bruner, L. The Rocky Mountain locust in Wyoming and, 2267.
Monterey again. Butterfly-tree of, 2052.
More good words, 532.
    universal remedies, 278.
Morning-glory. Coptocycla aurichalcea on, 1510.
    Sphinx. White-lined, 630, 1198, 1301, 2291.
Morus as food for Sericaria, 2234.
Mosquitoes, 603.
    vs. malaria, 2162.
Mossy rose-gall, 570, 1166.
Most precious bug, 575.
Moth on apple-tree. Large, 1028.
    Bee, 716, 904, 1059, 1508, 1723.
    breeding. Pedigree, 2381.
    eggs, 611.
    Handmaid, 2222.
    issuing from a larva, 1779.
    named, 807, 1241.
    Viviparity of a, 2153.
Motherless race. That fatherless and, 1650.
Moths attracted by falling water, 2108.
    and butterflies caught by the tongue, 1761.
    caught in Alabama, 1774.
    in cushions. Ravages of, 1731.
    Descriptions of two new, 1411.
    Galls made by, 1127.
    Lure for, 1695.
    mistaken for Aletia, 1976.
    by Physianthus albens. Capture of, 1388, 1419, 1761.
    Sugaring for, 1300.
Mottled tortoise-beetle, 1127.
Moulting in Orgyia. Variable, 2379.
Mounding peach-trees, 587.
    again, 617, 653.
Mountain ash. Ash and, 705.
MOUNTAIN ASH. INSECTS AFFECTING.
    ? Aphis mali, 579.
    Aspidiotus harrisii = Chionaspis furfurus.
    Chionaspis furfurus, 579.
Mountain ash. Plant-louse eggs on apple and, 579.
Mud-wasp and parasites, 1827.
    spider egg-nest, 1847.
Mulberry. Sericaria mori on, 1311, 1341, 2234.
    silk-worm, 1311.
        Osage orange for the, 1220, 1286.
    for the silk-worm. Osage orange *vs.*, 2234.
Mulch hay. Worms under, 1161.
Mules caused by insects. Death of, 1811.
Murgantia histrionica, 849, 1099, 1297, 1311, 1534, 2238, 2263, 2291.
Murky ground-beetle, 486.
Murmidius. Habits of, 2217.
Murmidius ovalis, 2217.
Murtfeldt, M. E. Notes from Missouri, 2291.
    for the season of 1886, 2382.
Musca, 1390.
    domestica, 815, 864, 2071, 2078.
    harpyia = M. domestica.
Muscid, 459.
    from stomach of Ohio shad, 1853.
Muscidæ, 153, 1880, 2256.
Muscle-shaped bark-louse on apple-trees South, 1774.
Museum pest. Dinoderus pusillus as a, 2104.
    A new, 2109.
    once more, 492.
    Trogoderma tarsale as a, 2139.
    pests, 246, 462, 572, 726.
        again, 483.
Mutilla coccinea = Sphærophthalma occidentalis.
Mycetophila persicæ *n. sp.*, 653, 660, 963, 1056.

Mycetophila sp., 419.
Mychocerus, 2217.
Mygale hentzii, 466, 493, 521, 823, 1178.
  and Pepsis formosa, 1619.
Myochrous denticollis, 2418.
Myriapoda, 219, 224.
  Poisonous, 2399.
Myriapods, 1625.
Myrmecocystus hortusdeorum, 1942.
  mexicanus, 1417.
Myrmecophila, 2202.
Myrmecophilous coleoptera, 2105.
  lepidoptera, 2214.
  species. Hymenorus rufipes as a, 2226.
Myrmica minuta, 1413.
Myrmicocela ochracella, 2261.
Mysia 15-punctata = Anatis 15-punctata.
Mystery. Dr. Hagens', 1943.
  in reference to Pronuba yuccasella, 1933.
Mytilaspis, 1.
  conchiformis = M. pomorum.
  pomicorticis *n. sp.*, 1329 = M. pomorum.
  pomorum, 188, 201, 345, 372, 373, 377, 423, 565, 896, 944, 951, 973, 982, 989, 994, 1007, 1008, 1012, 1040, 1056, 1059, 1084, 1169, 1246, 1329, 1362, 1397, 1552, 1583, 1774, 2088, 2238.
Myzus cerasi, 678, 960, 1067, 1207, 1251.
  ribis, 304, 322, 735, 970.
Nails into fruit-trees. Driving, 87.
Nanodes tamarisci, 1496.
Nantucket. Pine-moth of, 2183.
Naphthaline cones, 2133.
  for insect collections, 2073.
  as an insecticide. Use of, 2274.
Napping. An entomologist caught, 1100.
Narrow-winged katydid, 1363.
National Museum. The collection of insects in, 2299, 2390.
  Reports on the department of insects in the, 2282, 2330, 2368.
Native American insects. Imported and, 1115, 1127.
  apple-tree bark-lice, 1152.
  bark-lice on apple-trees, 1061.
  currant-worm, 1570, 2238.
  grape-vines. Cause of deterioration in some of our, 1342.
  home. Colorado potato-beetles, 1462.
  plums. Wier, D. B., 2388.
Naturaliste Canadien. Le (review), 546.
Naturalists. Entomological speculations of the New England school of, 44.
Neal, J. C. Observations and experiments, 2164.
Nebraska bee-killer, 1127, 1311.
  Bruner, L. Notes from, 2291.
  Report of the season's observations in, 2418.
  insects, Bruner, L. Report on, 2382.
Necrobia ruficollis, 1363.
  rufipes, 1363, 1367, 1703.
Necrological, 1817.
Necrophorus marginatus, 315, 845.
Nectarophora granaria, 126, 1806, 2394.
  rudbeckiæ, 27, 2205.
Needle. Devil's darning, 1709.
Negro bug. Flea-like, 1127, 1423, 2291, 2418.
Nematus erichsoni, 2198, 2232, 2355.
  fur *n. sp.*, 197.
  hospes *n. sp.*, 197.
  inquilinus *n. sp.*, 197.
  integer, 2232.
  mendicus *n. sp.*, 197, 821.
  ribesii, 78, 140, 228, 333, 340, 364, 380, 381, 756, 772, 1031, 1224, 1570, 1696, 2238.
  ribis = N. ribesii.
  s.-desmodioides *n. sp.*, 197.
  s.-pisum *n. sp.*, 197.
  s.-pomum *n. sp.*, 197.
  Spruce, 2232.
  ventralis, 907, 917, 924, 1211.
  ventricosus = N. ribesii.
Nemestrinidæ, 2186.
Nemobius vittatus, 1287.
Nemoræa leucaniæ, 6, 12, 647, 1112, 1127, 1670.
Neoclytus capræa, 560, 582, 1849.
  erythrocephalus, 1798.
Nephelodes violans, 1885, 1990.
Nephila plumipes, 830.
  Peculiarities of, 1416.
Nepidæ, 797.
Nerium oleander. Moths caught by, 1419, 1761.
Nervous system of articulates. Yersin. Function of the, 1959.
  insects, 2225.
  Phylloxera, 1687.
Neuroptera, 1329, 1736, 2267.
  North American, 24, 39.
Neuroterus q.-saltatorius, 1496, 2163, 2173.
Nevada. Locust in, 2024.
New Curculio humbug, 680.
New England and New York. Packard, A. S. Causes of destruction of evergreen and forest trees in, 2232, 2291, 2363, 2364, 2382.
  school of naturalists. Entomological speculations of the, 44.
  entomological journal, 2056.
  Hampshire. Colorado potato-beetle in, 1859.
  humbug, 122.
  Mexico. Blister beetles from, 1796.
  philosophy. Old and, 392.
  York. Chinch-bug in, 2237, 2252, 2271.
    Colorado potato-beetle in, 1379.
    and Eastern States. Supposed army-worm in, 1990.
    Entomology in, 2244, 2254.
    Packard, A. S. Causes of destruction of evergreen and forest trees in New England and, 2232, 2291, 2363, 2364, 2382.
    State entomologist for, 1863.
    weevil, 306, 652, 659, 1301.
      in apple trees, 1085.
    without a State entomologist, 1330.
News. Recent cotton-worm articles in the, 1719.
Nicotiana tabacum. Flea-beetle eating, 1782.

Night. How the Curculio flies by, 706.
Ninth report State entomologist of Missouri, 1570.
Niptus hololeucus, 2154.
Nitidula bipustulata, 214.
Nitidulidæ, 37, 214.
Noctuid. A unique and beautiful, 2189.
Noctuidæ, 455, 787, 1419, 1761.
of the Missouri reports, 2069.
North America. Notice of Grote's illustrated essay on the, 2148.
Parasites of, 349.
taken at Orono, Me., 2160.
Nola sorghiella *n. sp.*, 2119.
Nomenclature. Scientific, 303, 768.
None so blind as those who shut their eyes, 275.
Nonsense about the Phylloxera, 1457.
North America. Dilar in, 2023.
Early references to the Hessian-fly in, 2267.
Notes on Psyllidæ of, 2272.
Packard, A. S. Zoo-geographical map of, 2267.
American Anthomyidæ, 1966.
Coleoptera. Classification of, 2085.
Hymenoptera. Descriptions of, 385.
Lepidoptera. New lists of, 2132.
Microgasters. Notes on, 1960.
microlepidoptera. Works on, 1975.
Entomological ignorance in the, 431.
Northern army-worm, 1835.
brenthian, 1363.
Illinois. Six worst enemies of fruit-growers in, 377.
lady-bird and its larvæ, 1289.
Northwest in 1883. Bruner, L. Rocky Mountain locust in the, 2277.
on the Rocky Mountain locust. Bruner, L. Report of observations in the, 2165.
Note, 184, 954.
Notes. Entomological, 2, 1396, 1554, 1609, 1610, 1681, 1958, 2015, 2058, 2066, 2135, 2147, 2168, 2184, 2192, 2219, 2228, 2247, 2261.
by B. D. Walsh, 174.
Nothrus ovivorus, 1357.
Notices, 196.
Notodonta concinna = Œdemasia concinna.
unicornis = Cœlodasys unicornis.
Nottiglossa undata = Oncometopia undata.
Noxious insects increase upon us. Why, 766.
named, 454.
Poisoning, 205.
Popular remedies for, 73.
Nozzle. Cyclone, 2327.
Nuisance. Caterpillar, 1995.
made useful, 983.
Number of entomologists in Europe, 1865.
molts and length of larval life as influenced by food, 2167.
segments in the head of winged insects. Packard, A. S., 2267.
Nursery. Holes around the roots of young ash trees in the, 471.
Nuts. Gall, 1560.
Nymphalidæ, 1301.
Pupation of, 1704.
Nysius angustatus, 1329, 1357, 1402, 1453, 2048, 2291.
destructor *n. sp.*, 1329 = N. angustatus.
n. sp., 1317.
Oak apple, 1448.
bark louse, 159.
borer, 2267.
Clytus, 2267.
coccid mistaken for a gall, 1972.
fig gall, 745.
gall, 212, 1925.
on acorn cups. A new, 1606.
Honey-producing, 1942.
Leafy, 774.
OAK. INSECTS AFFECTING.
Amphibolips q.-inanis, 1448.
q.-prunus, 1606.
q.-spongifica, 1448.
Andricus q.-californicus, 1967.
q.-punctatus, 1822.
seminator, 739, 1037.
Balaninus rectus, 1311.
Biorhiza forticornis, 745.
Cecidomyia q.-pilulæ, 799.
q.-symmetrica, 799.
Cecidomyidæ, 799.
Cerambycid, 2267.
Ceroptres ficus, 745.
Coccus, 159.
Cossus robiniæ, 1003.
Cynipid, 212.
Cynipidæ, 41, 799.
Cynips fecundatrix, 1606.
forticornis = Biorhiza forticornis.
gallæ-tinctoriæ, 1560.
q.-californicus = Andricus q.-californicus.
q.-decidua, 1925.
q.-frondosa, 774, 1606.
q.-glandulus, 1606.
q.-inanis = Amphibolips q.-inanis.
q.-mellaria, 1942.
q.-prunus = Amphibolips q.-prunus.
q.-punctata = Andricus q.-punctatus.
q.-spongifica = Amphibolips q.-spongifica.
seminator = Andricus seminator.
sp., 799.
terminalis, 1448.
Edema albifrons, 422.
Elaphidion parallelum = E. villosum.
putator = E. villosum.
villosum, 288, 793, 2267.
Euclemsis bassetella, 1972.
Galls, 1269.
Holocera glanduella, 1310, 1311.
Ithycerus noveboracensis, 1033.
Kermes galliformis, 1972.
Lachnosterna fusca, 1812.
pilosicollis = L. tristis.
quercina = L. fusca.
tristis, 966.

OAK. INSECTS AFFECTING—Continued.
Lithocolletis cincinnatiella, 1879.
Mallodon melanopus, 2291.
Myrmecocystus hortus-deorum, 1942.
Mytilaspis pomicorticis = M. pomorum.
pomorum, 973.
Ozognathus cornutus, 1967.
Phylloxera lichtensteini, 1421.
Tenthredinid, 108.
Xylotrechus colonus, 2267.
Oak. Insects stripping the bur, 966.
leaf gall, 799.
Leaf-miners on white, 1879.
Phylloxera, 1363.
pruner, 793.
and rose galls, 1037.
tree borer, 1003.
caterpillars, 422.
twigs. Cynipid galls on, 1822.
Woolly galls on white, 739.
OATS. INSECTS AFFECTING.
Aphis avenæ = Neotarophora granaria.
Nectarophora granaria, 1806.
Silvanus surinamensis, 1259.
Oats and rye. Beetles working in wheat, 1259.
Oberea bimaculata, 302, 783, 1363.
perspicillata = O. bimaculata.
sp., 1059.
? boring in apple twigs, 1850.
tripunctata, 1503.
Obituary. Bazille, L., 2370.
Belfrage, G. W., 2161.
Chambers, V. T., 2218.
Clemens, B., 223.
Glover, T., 2218, 2258.
Lichtenstein, J., 2370.
Maeklin, F. W., 2161.
Mniszech, G. V., 2054.
Putnam, J. D., 2054.
Oblong winged katydid, 1329, 1363.
Eggs of the, 569, 1157.
Ocellate leaf gall of the red-maple, 2119.
Odonata. Venation of, 39.
Odontota, 2267.
dorsalis, 451.
rubra, 1849, 1876.
Supposed eggs of, 1876.
Odor in butterflies, 2025.
Odynerus, 770, 1827.
birenimaculatus, 1827.
flavipes, 770, 1827.
Œcanthus, 2267.
latipennis *n. sp.*, 2026, 2276.
niveus, 143, 251, 286, 414, 554, 723, 953, 961, 999, 1006, 1059, 1122, 1323, 1329, 1333, 1503, 1691, 2195, 2238, 2276.
Habits of, 207.
Œcodoma fervens = Atta fervens.
Œdemasia concinna 61, 413, 454, 779, 788, 922, 1545.
Œdipoda atrox, 1959.
carolina = Dissosteira carolina.
cruciata, 2075.
obliterata, 1959.
pellucida, 1959.
Œdipodini, 1959.
Œnothera grandiflora. Moths caught by, 1419, 1761.
Œstridæ, 114, 153, 290, 2256.
Œstrus hominis = Dermatobia hominis.
ovis, 450, 887, 914, 1057, 1059, 1357, 1563, 2238.
Œta compta = Œ. punctella.
punctella, 1059, 1343.
Ohio insects. Alwood, W. B. Report on, 2382.
Oil-beetles, 1053, 1643.
Old-fashioned potato-bugs, 185.
and new philosophy, 392.
question of species, 2201.
Oleander. Chilocorus bivulnerus on, 730.
Coccid on, 218.
Insects on, 730.
Olfersia americana, 2297.
Omaha. Conference of western governors at, 1557.
Oncideres amputator, 1556.
cingulata, 442, 443, 476, 489, 746, 848, 1556, 1938.
putator, 1556.
Oncometopia undata, 36, 79, 164, 399, 1013.
One day's journal of a state entomologist, 383.
effect of the Mississippi floods, 2080.
half the vine area of France affected by Phylloxera, 2020.
Onion-fly, 225.
ONION. INSECTS AFFECTING.
Anthomyia ceparum, 225.
Cambala annulata, 236.
Iulus multistriatus = Cambala annulata.
Ortalis flexa = Tritoxa flexa.
Tritoxa flexa, 225.
Onion-maggot. Means against the, 12.
pest. Chester, 2319.
Ontario. Index to the entomological reports of the province of, 2228.
Onward march of the Colorado potato-beetle, 1218.
Ophiogomphus mainensis *n. sp.*, 39.
Ophion. Long-tailed, 1311.
macrurum, 1112, 1802.
purgatum, 1442, 1670.
Purged, 1127.
Opsicœtus personatus, 497.
Orange. Bark-louse on osage, 389.
in Brazil. Branner, J. C., insects injurious to the, 2277.
California. Scale-insects of the, 2389.
Experiments upon scale-insects affecting, 2164.
in Florida. Voyle, J., the effects of cold on the scale-insects of the, 2277.
Hubbard, H. G. Rust of the, 2291.
ORANGE. INSECTS AFFECTING.
Coccid, 218.
Mite, 2291.
Phytopus oleivorus, 2308.
Orange insects. Californian, 2373.
and cotton-worm, 2067.
Kerosene as a means against, 2164.
Miscellaneous notes on, 2164.

Orange insects. Successful management of the most destructive, 2088.
  for the mulberry silk-worm. Osage, 1220, 1286.
  Rust of the, 2308.
  Scale-insects of the, 2119.
  seed. Worms in osage, 597.
  Silk-worms fed with osage, 1341, 1542.
  Successful management of insects most destructive to the, 2088.
  trees. Insects found about, 1798.
Orchard giving out. An, 578.
  Injured, 1594.
  Scolytus. Imported, 2233.
  Houghton's insects in the, 188.
Orchelimum, 118, 861.
  glaberrimum, 1329.
  gracile, 447.
Oregon. Apple-plant lice in, 1899.
Organisms. Interaction of, 139, 1954.
Orgyia, 872.
  antiqua, 1797.
  Glands in, 2412.
  leucostigma, 65, 480, 535, 600, 762, 1000, 1059, 1151, 1227, 1352, 2198, 2238, 2378, 2379, 2380.
  moth issuing from a larva, 1779.
  Variable moulting in, 2380.
Oribatidæ, 1363.
Original habitat of Icerya purchasi, 2415.
Orocharis saltator, 513, 1287, 1323, 1329, 2276.
Ortalis flexa = Tritoxa flexa.
Orthocentrus pusillus, 385.
  stigmaticus *n. sp.*, 385.
  trifasciatus *n. sp.*, 385.
Orthoptera, 1329, 2267, 2276.
Orthoptera, Packard, A. S, systematic position of the, 2267.
Orthopterous insects. Packard, A. S., embryological development of, 2267.
Orthosoma brunneum, 95, 397, 2267.
  Cylindrical, 1059.
  cylindricum = O. brunneum.
  unicolor = O. brunneum.
Osage orange. Bark-louse in. 389.
OSAGE ORANGE. INSECTS AFFECTING.
  Dipteron, 597.
  Lecanium acericola = Pulvinaria innumerabilis.
    macluræ = Pulvinaria innumerabilis.
  Pulvinaria innumerabilis, 389.
  Sericaria mori, 1341, 1542, 1609, 2234.
  Sphinx hageni, 2119.
Osage orange for the mulberry silk-worm, 1220, 1286.
  seed. Worms in, 597.
  Silk-worms fed with, 1341, 1542.
  Sphinx, 2119.
  vs. mulberry for the silk-worm, 2234.
Osborn, H., report of experiments at Ames, Iowa, 2344.
  upon the insects of the season in Iowa, 2418.
Oscinis, 2394.
  brassicæ *n. sp.*, 2291.
Oscinis. Cabbage, 2291.
Other insects affecting cheese, 1703.
Otiorhynchidæ injurious to cultivated plants, 2117.
Otiorhynchus picipes, 1788.
Our bugs, 2374.
  table. On, 395, 408, 506, 546, 568, 623, 827, 1110.
Out of evil cometh good, 618.
Outbreaks of army-worms. Recent, 2262.
Overcrowded, 654.
Overflow bugs in California, 2099.
Oviposition in Carabidæ. Mode of, 2341.
  Prodoxus decipiens, 2049.
  round-headed apple-tree borer, 2266.
  Saperda bivittata, 1621.
  Tortricidæ, 1922.
  the Yucca moth, 1354.
Owlet moth. Spider-wort, 1301.
Owls' pellets, 601.
Ox insects, 290.
Oxalis. Aleurodes on, 1791.
Ox-eye daisy as an insecticide, 1861.
Oxyopes viridans, 2343.
Oxyptilus periscelidactylus, 1059, 1175, 1301.
Oyster-shell bark-louse, 373, 1059, 1127.
  of the apple, 1329, 2238.
  in Missouri, 1169.
Ozognathus cornutus, 1967.
Pachylobius picivorus, 845.
Pachypsylla *n. g.*, 2208, 2272.
  c.-gemma *n. sp.*, 2272.
  c.-mamma *n. sp.*, 2208, 2272.
  venusta, 2208, 2272.
Pachytylus migratorius, 1959, 2044.
Pacific coast. Entomologist for the, 2022.
  Wheat-stalk worm on the, 2123.
Pack your insects. Mind how you, 435.
Packard, A. S. Additions to the third report on the causes of the destruction of the evergreen and other forest trees in northern New England, 2364.
  Causes of destruction of evergreen forests in New England and New York, 2232.
  Descriptions of larvæ of injurious forest insects, 2267.
  Development of the bark-boring beetles Hylurgops and Xyleborus, 2267.
  Embryological development of Caloptenus atlanis, 2267.
  Embryological development of Caloptenus spretus, 2267.
  Embryological development of the locust, 2267.
  Embryological development of orthopterous insects, 2267.
  Fourth report on insects injuring forest and shade trees, 2382.
  The Hessian-fly, 2267.
  Narrative of the first journey in 1877, 1643.
    a second journey in 1877, 1643.
  Notes on forest-tree insects, 2253.

Packard, A. S. Notes of a journey to Utah and Idaho in 1878, 1959.
    Number of segments in the head of winged insects, 2267.
    Second report on the causes of the destruction of the evergreen and other forest trees in northern New England and New York, 2291.
    Systematic position of the Orthoptera in relation to the other orders of insects, 2267.
    Third report on the causes of the destruction of the evergreen and other forest trees in northern New England, 2363.
Packard's Guide to the study of insects (Review), 395, 479, 827.
Pædisca celtisana *n. sp.*, 1968.
    giganteana *n. sp.*, 1968.
    obfuscata. Girdling habits of, 2405.
    scudderiana, 2356.
        Notes on, 2213.
Painted borer, 89.
    lady-bird, 1329.
Pale thighed tortoise beetle, 1127.
Paleacrita *n. g.*, 1438.
    vernata, 75, 86, 172, 173, 377, 1021, 1066, 1127, 1357, 1363, 1423, 1438, 1482, 1539, 1604, 1847, 2012, 2149, 2238, 2267.
Palingenia bilineata = Hexagenia bilineata.
    flavescens *n. sp.*, 24.
    pulchella *n. sp.*, 24.
    terminata *n. sp.*, 24.
    vittigera *n. sp.*, 24.
Pamphila ethlius, 1897.
Paniscus geminatus, 1059.
Pangus caliginosus = Harpalus caliginosus.
Panorpa, 2267.
Panorpidæ, 2267.
Paper-makers, 505.
Paphia glycerium, 1117, 1127, 1329, 1704, 1711.
Papilio, 1352.
    asterias, 453, 804, 863, 1272, 1276, 1512.
    cresphontes, 1237, 1300, 1914.
    glaucus, 28, 1048.
    marcellus, 666.
    philenor, 1127, 1321, 1774, 1957.
    thoas = P. cresphontes.
    troilus, 469, 857.
    turnus, 28, 361, 1048.
Parandra brunnea, 1733, 1876.
Paraphia. Fir, 2363.
Pararhyssa *n. g.*, 385 = Rhyssa.
Parasa chloris, 1233.
Parasite of cabbage-worm, 2221.
    canker-worm, 717.
    the imported cabbage-worm. Introduction of a, 2291.
    Imported currant-worm fly and its, 380, 381.
    Mud-wasp and, 1827.
    Phora not a, 1923.
    on Prodoxus decipiens, 1831.
    or a scavenger? Is Cyrtoneura a, 2102.
    Sheep, 2043.
Parasites, 66.
    on bees, 1500.
    bred from cotton-worm, 1722.
    of Colorado potato-beetle. Mite, 1505.
        cotton-worm, 1712.
        cut-worms, 349.
    Efficacy of Chalcid egg, 2115.
    on eggs of Caloptenus spretus, 161
        fowls, 1308.
        the hateful grasshopper, 728.
    Hessian-fly, 2332.
    Hog-caterpillars of the vine infested with, 1247.
    of the human animal, 728.
    Importing European, 208.
    on its larva. The Abbot Sphinx, 1277.
    of the larva of Lachnosterna fusca, 2301.
    Leucania unipuncta, 6, 10, 17, 1670.
    of the plum Curculio, 1751, 1795.
    Synonyms of, 1932.
Parasitic cocoons, 158, 1125, 1134.
        Not eggs but, 1290.
    coleoptera, 2353.
    diptera, 2076.
    flies, 310.
    fungus. Remarkable, 1313.
Parasitized tomato-worm, 155.
Paria aterrima, 1887, 1904, 2229.
Paris green absorbed? Is, 1487.
    for cotton-worms. How to use, 1544.
    the curculio, 1258.
    its effects on plants, soil, and man, 1427.
    as an insect destroyer, 1447.
        insecticide. Use of, 1497.
Paris green, London purple and, 2021.
    purple, 2021.
Parorgyia. Glands in, 2412.
    Synonyms and food-plants, 2412.
Parsnip caterpillars, 453, 804.
PARSNIP. INSECT AFFECTING.
    Papilio asterias, 453, 804, 863, 1273.
Parsnip worm, 863.
Parthenogenesis of the Hessian-fly. Probable, 1787.
    in insects Occurrence of, 1029.
    of Mytilaspis pomicorticis, 1056.
Passalus cornutus, 1311, 1329, 1636.
    Horned, 1311.
        Egg of, 1329.
Passer domesticus as an insect destroyer, 1667.
PEA. INSECTS AFFECTING.
    Bruchus pisi, 434, 1120, 1301, 1916, 2238.
    Cerotoma caminea, 2418.
    Gryllus sp., 2383.
Pea and its insect foes, 14.
    weevil, 1301, 2238.
Peach borer, 1017, 1059.
        Flat-headed, 2267.
    borers, 871, 1366.
        Apple and, 1475, 1513.
        Means against, 121.
PEACH. INSECTS AFFECTING, 514.
    Ægeria exitiosa = Sannina exitiosa.
    Asilus sp., 666.
    Callimorpha lecontei, 1301.

PEACH. INSECTS AFFECTING—Continued.
Carpocapsa pomonella, 1334.
Cetonia inda = Euphoria inda.
Dicerca divaricata, 871, 2267.
Ephestia interpunctella, 325.
zeæ = E. interpunctella.
Eriocampa cerasi, 1253.
Euphoria inda, 447.
Gortyna nitela, 632, 1210.
Helops æreus, 751.
pullus = H. æreus.
Larva, 661.
Lepidopteron, 697, 1210.
Lithophane antennata, 1182.
Mycetophila persicæ, 653, 660.
sp., 419.
Œcanthus niveus, 554.
Phlœotribus liminaris, 2047.
Sannina exitiosa, 587, 617, 871, 1017, 1059, 1070, 1475, 1513, 2238.
Scolytus rugulosus, 1940.
Selandria cerasi = Eriocampa cerasi.
Thyridopteryx ephemeræformis, 1189.
Xylina cinerea = Lithophane antennata.
Peach. Large green worm in a, 661.
tree bark borer, 2047.
borer, 1070, 2238.
borers, 871.
trees again. Mounding, 617, 653.
Beetle around, 751.
Insects around, 660.
Minute borers in, 1940.
Mounding, 587.
Sulphur cure for, 176.
Supposed cause of yellows in, 515.
twig borer, 632, 697.
twigs. Eggs in, 554.
worm, 325.
Blue spangled, 1301.
boring into, 1182.
Pear. Apple-bark lice on, 973.
Banded Ips in calyx of, 1239.
Bark-lice on the, 982.
and cherry trees. Slug on, 1222.
Diplosis, 2363.
PEAR. INSECTS AFFECTING.
Anametis grisea, 2117.
Anthonomus quadrigibbus, 1358.
Aragnomus griseus, 2428.
Aspidiotus harrisii = Chionaspis furfurus.
Capsus oblineatus = Lygus pratensis.
Carabid, 692.
Carpocapsa pomonella, 1334.
Cerambycid, 288.
Chionaspis furfurus, 372.
Chloroneura malefica = Empoasca viridescens.
maligna = Empoasca obtusa.
Clisiocampa americana, 363.
Conotrachelus cratægi, 1358.
nenuphar, 1358.
Corimelæna pulicaria, 741.
Diplosis nigra = D. pyrivora.
pyrivora, 2363, 2392.
Dolerus unicolor, 1989.
Empoasca obtusa, 22.
viridescens, 22.
PEAR. INSECTS AFFECTING—Continued.
Eriocampa cerasi, 1031, 1382.
Euphoria melancholica, 372.
Euryomia melancholica = Euphoria melancholica.
Ips fasciatus, 1239.
Lygus pratensis, 2, 31.
Mytilaspis pomicorticis = M. pomorum.
pomorum, 973, 982.
Notodonta concinna = Œdemasia concinna.
Œdemasia concinna, 779.
Oncideres cingulata, 848.
Platycerus quercus, 1162.
Polycaon confertus, 2103.
Prionus laticollis, 561.
Rhopalus sp., 372.
Scolytus rugulosus, 2233.
Selandria cerasi = Eriocampa cerasi.
Tremex columba, 928.
Typhlodromus pyri, 1739, 1759.
Pear leaf blister, 1739.
midge, 2363.
root-borer, 561.
shoots. Bug gathering on, 741.
slug. Blood-sucker and, 1253.
Currant worm and, 1031.
tree borer. Elm and, 928.
insect. A new, 1162.
insects, 277.
Rows of eggs in, 577.
slug, 1382.
worms, 779.
twigs. Girdled, 848.
Two new foes of the apple and, 22.
Pearl wood nymph, 1127. 1301, 1363.
Pears. Curculios on, 1358.
Peas. Buggy, 1916.
from bugs. To keep seed, 434.
Pecan trees girdled by Oncideres cingulata. Young, 489.
Pediculina, 258, 497.
Pediculus capitis, 497.
cervicalis = P. capitis.
humanus = P. vestimenti.
pubis = Pthirius pubis.
vestimenti, 497.
Pedigree moth breeding, 2381.
Pelargonium. Gall on, 1764.
Pelidnota punctata, 40, 113, 129, 354, 358, 725, 1221, 1301.
Spotted, 1301.
Pelopæus cementarius, 543, 1371.
Habits of Polistes and, 1371.
lunatus = P. cementarius.
Pempelia hammondi *n. sp.*, 810, 1311, 1322.
lignosella, 2119.
Pemphiginæ. Biological notes on gall-making, 1653, 1678.
Pemphigini, 2017.
Pemphigus acerifolii *n. sp.*, 1678.
formicarius *n. sp*, 27.
formicetorum *n. sp.*, 27.
fraxinifolii *n. sp.*, 1678, 2361.
imbricator, 449, 1396, 2361.
populicaulis, 446, 713.
populi-monilis *n. sp.*, 1678.

Pemphigus populi-ramulorum *n. sp.*, 1678.
populi-transversus *n. sp.*, 1678.
pyri = Schizoneura lanigera.
rhois, 518.
tessellata, 1948.
ulmifusus *n. sp.*, 518.
vagabundus, 446, 518.
vitifoliæ = Phylloxera vastatrix.
Penetrating organ in a gamasid mite. On an extensile, 1626.
Pennsylvania ground beetle, 1059.
soldier beetle, 1059.
Pentagenia *n. g.*, 39.
quadripunctata *n. sp.*, 39.
Pentarthron *n. g.* (See p. 379) = Trichogramma.
Penthina fullerea *n. sp.* (See p. 378) = P. hebesana.
vitivorana = Eudemis botrana.
Pepsis formosa, 466, 521, 543, 823.
Mygale hentzii and, 1619.
Periclistus sylvestris, 1131.
Perilitus indagator, 1311.
Perimegatoma variegatum, 2109.
Periodical Cicada, 474, 527, 619, 1059, 1311, 1489, 1624, 1836, 2014, 2312, 2314, 2315, 2363.
alias the seventeen-year locust, 1971, 1979.
alias the seventeen-year and thirteen-year locust, 1159.
Belated individuals of the, 648.
in Massachusetts, 2321.
Notes on the, 2318.
Our first brood established, 707.
Premature appearance of the, 2320, 2326.
in savin twigs. Eggs of the, 698.
Song notes of the, 2334.
Periodical Cicada in southeastern Indiana. Butler, A. W., 2364.
Massachusetts, 2216.
Twigs punctured by, 1055.
or seventeen-year Cicada, 2312, 2314.
Perla decipiens *n. sp.*, 24.
dorsata, 903.
elongata *n. sp.*, 24.
flavescens *n. sp.*, 24.
fumipennis *n. sp.*, 24 = Chloroperla fumipennis.
producta *n. sp.*, 24.
varians *n. sp.*, 24.
Perlidæ, 2267.
Perny silk-worm, 1311.
Persian insect powder, 1485.
PERSIMMON. INSECTS AFFECTING.
Ceratocampa regalis = Citheronia regalis.
Citheronia regalis, 1275.
Pests. Carpet, 1663.
Drug-store, 510.
Museum, 246, 462, 572.
Potato, 1554.
of the strawberry, 2324.
West. Winged, 2313.
Petroleum as insecticides. Emulsions of, 2134.
and their value as insecticides. Emulsions of, 2126, 2200.
Pezomachus, 158.
Diminished, 1127.
minimus *n. sp.*, 12, 1442, 1670.
Pezotettix, some species dimorphic forms of Caloptenus, 1889.
pacifica *n. sp.*, 1959.
Phakellura nitidalis = Eudioptis nitidalis.
Phalæna zea, 2343.
Phalænidæ. Description of a new genus of, 1438.
Phalangidæ, 838.
Phaneroptera curvicauda = Scudderia curvicauda.
Phasmida, 2267.
Phasmomantis, 457, 590, 859, 971, 979, 1059, 1060, 2276.
Phengodes, 1874, 2397.
laticollis, 2412.
and Zarhipis. Further notes on, 2411, 2412.
Notes on, 2408.
Phengodina. On the luminous larviform females in the, 2397, 2402.
Phenomena. Vegetable, 436.
Pheocyma. Pine, 2363.
Phemonone 5-caudata, 2410.
Philampelus achemon, 1091, 1127.
pandorus, 1102, 1127.
satellitia = P. pandorus.
Philenor swallow-tail, 1127.
Philonthus, 1311.
Philosophy of the movement of the Rocky Mountain locust, 1669.
Old and new, 392.
of the pupation of butterflies, 1711.
Phlœotribus liminaris, 2047.
Phlox. Heliothis phloxiphaga injuring, 936, 945.
worm, 945.
Phoberia atomaris, 1976, 2343.
Phobetron hyalinum, 40.
pithecium, 777, 1272.
tetradactylus, 40.
Phora aletiæ, 1923, 1932, 2102, 2343.
a scavenger, not a parasite, 1923.
Phorodon humuli, 235, 279, 1001, 2393, 2394, 2396, 2400.
Phorostoma latum, 2260.
Phosphorescence of fire-flies. Intermittence of the, 1805.
the glow-worm. Nature of the, 1810.
Phosphorescent larvæ. Large, 1874.
Photinus. Food of Calopteron and, 2358.
pyralis, 396, 1097, 1705, 1917, 2358.
Photuris pennsylvanica, 1097, 1705, 1917.
Phoxopteris cornifoliana *n. sp.*, 1968.
fragariæ, 499, 984, 1059, 1574, 2324.
murtfeldtiana *n. sp.*, 1968.
nubeculana, 1721.
Phryganeidæ, 1138.
Phyciodes nycteis, 1410.
Phycita nebulella *n. v.*, 1311 = var. of Acrobasis indiginella.
Phycita nebulo *n. sp.*, 2 = Acrobasis indiginella.
Phyllobrotica longicornis = Diabrotica longicornis.
Phylloptera oblongifolia = Amblycorypha oblongifolia.

Phyllotreta albionica, 2291.
striolata = P. vittata.
vittata, 348, 564, 2291.
zimmermanni, 2291.
Phylloxera, 1355, 1396, 1404, 1406, 1428, 1449, 1644, 1671.
in California, 2140.
Grape, 1727.
Winged, 1895.
caryæ-avellana *n. sp.*, 1901.
-caulis, 360, 685, 1439.
-fallax *n. sp.*, 1423.
-foliæ, 1311, 1363.
-globuli *n. sp.*, 27, 360.
-gummosa, *n. sp.*, 1423.
-ren *n. sp.*, 1423.
-scissa *n. sp.*, 1901.
-semen, 373.
on chestnut, 353.
congress in Spain, 1907.
convention at Berne, 2147.
correction, 1355.
enemy. Grape-leaf, 1530.
in France. Grape, 2193.
with fungus disease. Infesting, 1808.
in Geelong, Victoria. Grape, 1732.
Grape, 1329, 1363, 1373, 1423, 1482, 1721.
and grape-rot, 1623, 1628.
Half the vine area of France affected by, 2020.
laws, 2019.
in Europe, 2248.
German, 2432.
lichtensteni, 1421.
mite, 1363.
Mold and, 1807.
Nervous system and salivary glands of, 1687.
New biological facts regarding the grape, 1421.
hickory galls made by, 1901.
Newest facts of grape, 1404.
Nonsense about the, 1457.
not at the Cape. Grape, 1841.
permanently destructive. The grape, 1907.
notes, 1406.
Notes on the grape, 1952, 2291.
in the natural history of, 1439.
Nouveau remède contre, 2283.
Oak, 1363.
One-half the vine area of France affected by, 2020.
quercus, 1363.
Remedies for, 1403.
rileyi, 1363, 1423, 1530.
in sandy soil, 2250.
Some recent discoveries in reference to, 2209.
spinosa, 2209.
in Switzerland. Extermination and restriction of, 2207.
Use of guano for the grape, 1837.
Phylloxera vastatrix, 127, 373, 565, 724, 840, 916, 1281, 1295, 1301, 1311, 1325, 1329, 1342, 1353, 1363, 1373, 1376, 1394, 1403, 1421, 1423, 1435, 1439, 1449, 1454, 1457, 1469, 1482, 1530, 1531, 1564, 1623, 1671, 1716, 1721, 1727, 1732, 1808, 1841, 1900, 1906, 1907, 1952, 2015, 2019, 2020, 2140, 2150, 2208, 2250, 2283, 2355.
Dipterous enemies of, 2150.
Impregnated egg of, 1974.
vitifoliæ = P. vastatrix.
work, 1900.
Phyloptera, 2267.
Phyloscia, 1900.
Phymata erosa, 778, 1660.
Physianthus albens, 1418, 1419.
Capture of moths by, 1388, 1419, 1761.
Peculiarities of, 1418.
PHYSIANTHUS. INSECTS AFFECTING, 1388.
Deilephila lineata, 1419.
Noctuidæ, 1419, 1761.
Sphingidæ, 1418, 1419, 1761.
Physicians. Quacks or, 282.
Physocnemum brevilineum, 696.
Physonota quinquepunctata *n. sp.* 767 = P. unipunctata.
unipunctata, 767.
Phytocoridæ, 1301.
Phytolacca not fed on by Aletia, 2343.
Phytonomus nigrirostris, 2355.
opimus = P. punctatus.
punctatus, 2010, 2028, 2061, 2119, 2355.
Further notes on, 2061.
rumicis, 2119.
Phytophagic species, 45, 50.
Phytophagic varieties, 45, 50.
Phytopus, 1739.
oleivorus, 2308.
Pickle-worm, 1127.
Pieridæ, 613, 1301.
Dimorphic, 28.
Pieris menapia, 2121.
monuste, 1991, 2232.
oleracea, 835, 1127, 2232, 2238.
protodice, 836, 1127, 2232, 2238.
rapæ, 1127, 1257, 1279, 1294, 1469, 1694, 1714, 1720, 1721, 1867, 1948, 2221, 2232, 2238, 2251, 2298.
into Alabama. Spread of, 1720.
vernalis, 1634.
Piesma cinerea, 398, 2048.
Pigeon Tremex, 458.
in apple, 1126.
Pigs. Lice on, 900.
Pimpla annulicornis, 2343.
annulipes, 1334.
atrata = Thalessa atrata.
cœlebs *n. sp.*, 385.
conquisitor, 2343.
inquisitor, 1059.

Pimpla investigatrix *n. sp.*, 385.
pictipes *n. sp.*, 385.
pleurivinctus = P. conquisitor.
Red-legged, 1329.
sp. on Parandra brunnea, 1876.
vidna *n. sp.*, 385.
Pine Amorbia, 2363.
borer. Common longicorn, 2291.
Lesser, 2267.
Caterpillars on the, 927.
and cedar. Longicorns in, 319.
False caterpillars on the, 986.
PINE. INSECTS AFFECTING.
Amorbia, 2363.
Asemum mœstum, 2267.
Aspidiotus pinifolii = Chionaspis pinifolii.
Borers, 1049.
Callidium antennatum, 319.
janthinum, 319.
Chionaspis pinifolii, 97, 1329, 2079.
Cybocephalus nigritulus, 2079.
Hylobius confusus, 1168.
Lachnus strobi, 320.
Lophyrus abbotii, 465, 927, 956, 1570.
lecontei, 985, 1011, 1570.
Monobammus titillator, 1324.
Pheocyma, 2363.
Pieris menapia, 2121.
Pissodes strobi, 781, 2363.
Podapion gallicola, 2231.
Ptinus brunneus, 191.
Therina, 2363.
Pine-leaf scale insect, 1329.
moth of Nantucket, 2183.
Pheocyma, 2363.
Therina, 2363.
trees. Butterfly larvæ injurious to, 2121.
killed by borers. White, 1049.
worm. Leconte's, 1570.
White, 465, 956.
Pinion. Ash-gray, 1301.
Pinus elliotii. Chionaspis pinifolii on, 2079.
inops. Gall on, 2231.
strobus. Insects affecting, 97, 320.
Pionea, Cabbage, 2232.
rimosalis, 1867, 1915, 2232.
Piophila casei, 1141, 1266, 1700, 1734.
radicum, 1357.
Pipiza femoralis, 495.
radicum *n. sp.*, 495 = P. femoralis.
Pirates biguttatus = Rasahus biguttatus.
picipes = Melanolestes picipes.
Pissodes strobi, 781.
PITCHER-PLANT. INSECTS AFFECTING, 1385.
Sarcophaga sarraceniæ, 1385, 1390.
Xanthoptera semicrocea, 1385, 1390.
Pithy blackberry gall, 1131.
galls on blackberry-twigs, 610.
Pityophthorus micrographis, 295.
minutissimus, 295.
Plagionotus speciosus, 547, 915.
Plagues. Insect, 2198.
Planipennia, 2267.
Plant-bug. Dotted legged, 1311.
Tarnished, 1127, 1219, 2291.
feeders. Carnivorous propensity of, 1867.
Plant-feeding habit of Feniseca tarquinius, 2361.
habits of predaceous beetles, 1956.
growing out of an insect, 332, 478.
lice, 23, 80, 265.
again, 1008.
Apple tree, 270, 335, 591, 996.
on berberry, 644.
Cherry-tree, 1067.
Currant, 304.
To destroy, 1148.
Destroying cherry, 1207.
enemies, 151.
Evergreen, 1039.
Mites mistaken for, 59.
from one plant to another. Migration of, 2017.
in Oregon. Apple-tree, 1899.
Plum-tree, 678.
on potatoes, 1679.
Scab in apple *vs.* apple-tree, 1139.
and their foes. Cherry, 1251.
their friends and foes, 198.
louse again. Eggs of the apple-tree, 550.
Apple, 883.
root, 373, 495, 1059.
tree, 1127.
Cabbage, 2291.
Corn-root, 23.
Currant, 322.
eggs on apple and mountain ash, 579.
Eggs of the apple-tree, 507, 539.
enemy, 301.
Grain, 99, 126, 1127.
Look out for the eggs of the apple-tree, 507.
White-pine, 320.
Plants. Fertilizing, 324.
Food of insectivorous, 1499.
and insects. Imported, 1339.
Otiorhynchidæ injurious to cultivated, 2117.
soil and man. Effects of Paris green on, 1427.
Platamodes unicolor, 573.
Platycerus quercus, 1162.
Platygaster herricki, 2332.
Platyhypena scabra = Hypena scabra.
Platynus æruginosus, 1013.
excavatus, 1013.
maculicollis, 2099.
punctiformis, 1798.
Platyphyllum concavum = Cyrtophyllus concavus.
Platypsyllus castoris, 2417.
as determined by the larva. Systematic relations of, 2417.
Platyptera, 2267.
Platyptilus carduidactylus, 1059.
Plectrodes scalator, 1330, 1525.
Plenty of specimens. Send, 593.
Pleurotropis phyllotretæ *n. sp.*, 2291.
Plug-ugly theory, 233, 1383.
Plum bark-louse, 107.
Curculio, 373, 1059, 1129, 1301, 2296.
breeds in the apple, 1214.

Plum Curculio, natural history and how to catch him, 1372.
Parasite for the, 1751, 1795.
gouger, 33, 34, 373, 1301.
gum. Larvæ in, 419.
PLUM. INSECTS AFFECTING.
Acarid, 1265.
Ægeria exitiosa = Sannina exitiosa.
Anthonomus prunicida = Coccotorus scutellaris.
Aphis cerasi = Myzus cerasi.
prunifoliæ, 678.
Attacus cecropia, 1249.
Bibio albipennis, 683.
Carpocapsa pomonella, 1334.
Cerambycid, 559.
Coccotorus scutellaris, 33, 373, 1301, 1378.
Colaspis sp., 372.
Conotrachelus geminatus, 34.
nenuphar, 33, 372, 373, 501, 566, 1059, 1071, 1301, 1372, 1477, 1685, 2296.
puncticollis *n. sp.*, 34 = C. geminatus.
Dipteron, 419.
Elaphidion parallelum = E. villosum.
villosum, 606.
Elaterid, 81.
Grapholitha prunivora, 373.
Hylobius stupidus = Pachylobius picivorus.
Lecanium sp., 107.
Lyda sp., 656.
Mytilaspis pomicorticis = M. pomorum.
pomorum, 973.
Myzus cerasi, 678.
Pachylobius picivorus, 845.
Phorodon humuli, 2393, 2394.
Sannina exitiosa, 81.
Scolytus rugulosus, 1940.
Semasia prunivora = Grapholitha prunivora.
Telea polyphemus, 765.
Plum leaf worms, 656.
moth, 373.
saw-fly, 2291.
tree insects, 683.
Minute borers in, 1940.
plant lice, 678.
twigs. Borer in, 559, 606.
Plume. Grape vine, 1059, 1301.
moth. Spruce, 2363.
Plums and cotton, 1477.
from Curculio. To protect, 1071.
for the million, 501.
Preventing rot in, 1685.
Wier, D. B. Native, 2388.
Plusia brassicæ *n. sp.*, 1127, 1867, 2232, 2238.
Cabbage, 1127, 2232, 2238.
dyaus, 2343.
Plutella. Cabbage, 1291, 2232.
cruciferarum, 614, 1201, 1297, 2232.
Pod-like willow gall, 1170.
Podabrus modestus, 358, 673.
rugulosus, 358.
Podapion *n. g.*, 2231.
gallicola *n. sp.*, 2231.
Podisus spinosus, 372, 456, 1378, 1431, 1450, 1672.
Podosesia syringæ, 844.
Poduræ, 1764.
Podura nivicola, 608.
Poduridæ, 317.
Pœcilloptera pruinosa, 737, 1329.
Pœcilocapsus lineatus, 715.
Poison. Potato pest, 1524.
Poisoning noxious insects, 205.
Poisonous Arachnida, 2399.
Is the Colorado potato-beetle, 1483.
flour, 586.
Hexapoda, 2399.
insects, 2399.
Myriapoda, 2399.
qualities of the Colorado potato-beetle, 1425.
qualities of the Colorado potato-bug, 1101.
spider, 2306.
Tomato-worm not, 771.
worm, 710.
Poisons to destroy insects. Use of, 1887.
Polistes fuscatus = P. metricus.
metricus, 1371.
and Pelopæus. Habits of, 1371.
rubiginosus, 543.
Pollenia rudis, 2128, 2174.
Pollination of Yucca, 1603, 2000.
Polycaon confertus. Habits of, 2103.
Polydesmus, 261.
complanatus, 215.
serratus, 342.
sp., 834.
virginiensis, 219.
Polymitarcys alba, 1926, 1961.
Polyphemus moth, 542.
Caterpillar of, 765.
Cocoon of, 1164.
silk-worm, 1311.
Polyrhabdus *n. g.*, 385 = Chorinæus.
cariniger *n. sp.*, 385 = Chorinæus cariniger.
Polysphincta nigriceps *n. sp.*, 385.
nigrita *n. sp.*, 385.
pimploides *n. sp.*, 385.
Pomace-fly. Pretty, 2119.
Vine-loving, 2119.
Pomphopœa ænea, 289, 301, 1056.
sayi, 188, 301.
Synoptic table of, 289.
tarsalis, 289.
Pomphilus formosus = Pepsis formosa.
Poplar borer, 71.
POPLAR. INSECTS AFFECTING.
Acronycta acericola = A. americana.
americana, 575.
Saperda calcarata, 1849.
Poplars. Caterpillars on Lombardy, 571.
Popular delusion, 525.
names, 100, 430.
remedies for noxious insects, 73.
Populus monilifera. Insects on, 1459.
Porcelio, 1900.
Porizon conotracheli *n. sp.*, 1751 = Thersilochus conotracheli.
Curculio parasite, 1301.

Potamanthus ? odonatus *n. sp.*, 24.
Potato beetle, 946, 968, 995, 1019, 1027.
abroad. The Colorado, 1364, 1407.
again. Colorado, 1301.
Colorado, 21, 334, 991, 1059, 1311, 1329, 1363, 1423, 1431, 1558, 1570, 2291, 2294 2418.
enemies, 313, 365.
in Europe. Colorado, 1597.
New Hampshire. Colorado, 1859.
Experience with, 1519.
Inquiries concerning, 1491
Insect enemies of the Colorado, 411.
Mite parasites of the Colorado, 1505.
in New York. Colorado, 1379.
The onward march of the, 1218.
poisonous ? Is the Colorado, 1483.
Poisonous qualities of the Colorado, 1425.
progress, 1480.
Specific for the Colorado, 1490.
Sweet, 1697.
Ten-lined, 925.
Three-lined, 1059, 1558.
beetles, 247, 470.
Driving, 1044.
Fire cure for, 121.
Large black, 1206.
native home. Colorado, 1462.
Safe remedies for, 1948.
Some notes on, 1528.
Sweet, 681, 1510.
Potato-bug, 742, 905, 1450, 1672.
Bogus Colorado, 519.
Colorado, 293, 334, 366.
in Maine, 119.
New, 48, 88, 171, 293.
Poisonous qualities of the Colorado, 1101.
bugs, 401, 794, 1096.
To destroy Colorado, 650.
Old-fashioned, 185.
and corn insects, 138.
Insect foes of the, 1558.
POTATO. INSECTS AFFECTING, 767, 1059.
Acarina, 1444.
Aphis solani, 1679.
Baridius trinotata = Trichobaris trinotata.
Cassida clavata = Coptocycla clavata.
Ceresa bubalus, 2107, 2235.
Coptocycla aurichalcea, 1510.
clavata, 693, 742, 1558.
Crepidodera brevis, 1782.
cucumeris, 401, 1056, 1059, 1558.
parvula, 1782.
Doryphora 10-lineata, 21, 48, 121, 138, 171, 293, 334, 347, 365, 366, 401, 565, 760, 905, 925, 946, 968, 995, 1019, 1027, 1044, 1059, 1218, 1301, 1311, 1329, 1363, 1364, 1379, 1405, 1407, 1423, 1425, 1431, 1450, 1462, 1480, 1482, 1483, 1490, 1491, 1505, 1519, 1524, 1528, 1558, 1570, 1597, 1672, 1859, 2081, 2294.
Epicauta cinerea, 401, 1056, 1558.
corvina, 1206.
pennsylvanica, 38, 401, 1056, 1558.
puncticollis, 1381.
POTATO. INSECTS AFFECTING—Continued.
Epicauta vittata, 401, 470, 794, 1056, 1230, 1558.
Epitrix brevis = Crepidodera brevis.
hirtipennis = Crepidodera parvula.
Gortyna nitela, 401, 1059, 1558, 2229.
Gryllus sp., 2383.
Haltica cucumeris = Crepidodera cucumeris.
Lema trilineata, 138, 401, 565, 925, 1059, 1558.
Lepidopteron, 794.
Lytta atrata = Epicauta pennsylvanica.
cinerea = Macrobasis unicolor.
marginata = Epicauta cinerea.
murina = Macrobasis unicolor.
vittata = Epicauta vittata.
Macrobasis unicolor, 38, 347, 401, 470, 1044, 1558.
Melanotus incertus ?, 846.
Meloidæ, 48, 121, 794, 1059, 1230.
Nysius sp., 1317.
Protoparce celeus, 1059, 1558.
5-maculata, 401.
Sciara sp., 239.
Sphinx 5-maculata = Protoparce 5-maculata.
Trichobaris trinotata, 401, 1059, 1558, 2172.
Potato. Meloidæ injurious to, 48, 121, 794, 1059, 1230.
New insect foe of the, 693.
pest poison, 1524.
pests, 1558.
Scab on, 239.
stalk-borer, 1059, 2172, 2229.
weevil, 1059, 1558, 2291.
worm, 1059, 1329, 1558.
Potatoes. Black blister beetles on, 1381.
Buffalo tree-hopper injurious to, 2107.
Plant-lice on, 1679.
Scabby, 1444.
Wire-worms in, 846.
Pot-herb butterfly, 1127, 2232, 2238.
Potter wasp, 770.
Fraternal, 1127.
Powder. Manufacture of pyrethrum, 1984.
Persian insect, 1485.
Powders and their use. Insect, 1692.
Practical entomology in reality, 914.
Prairie belt. First appearance of the cotton-worm in, 1852.
fires and hateful locust, 1453.
Prasocuris. Table of species, 156.
varipes, 156.
Predaceous beetles. Plant-feeding habits of, 1956.
Predictions verified, 1494.
Premature appearance of the periodical Cicada 2320, 2326.
Preparation of Diptera, 2041.
Preserving insects, 881, 1057.
Directions for collecting and, 881.
larvæ, 1300.
President. Washington Entomological Society. Address as, 2355.
Presidential address to St. Louis Academy of Sciences, 1564, 1629.
Pretty pomace-fly, 2119.
and unique gall-making tortricid, 2176.
Preying Mantis, 457.
Supposed eggs of, 1002.

Prickly ash larva, 1914.
Papilio cresphontes on, 1914.
rose gall, 1194, 1245.
PRIMROSE. INSECTS AFFECTING.
Alaria florida = Rhodophora florida.
Rhodophora florida, 1273.
Prionidæ. Food habits, 1902.
Prionidus cristatus, 262, 491.
Prionotus novenarius = Prionidus cristatus.
Prionus. Eggs of broad-necked, 1329.
imbricornis, 95, 1127.
laticollis, 95, 561, 1059, 1081, 1127, 1329, 2287.
Lesser, 2267.
sp. 736.
Tile horned, 1127.
Prisopus sp., 2267.
Pristiphora grossulariæ *n. sp.*, 140, 176, 189, 364, 772, 1570.
sycophanta *n. sp.*, 197.
Probabilities of locust or grasshopper injury in the near future, 2335.
Problem of the hop-plant louse in Europe and America, 2400.
fully solved, 2396.
Proboscis of the common house-fly, 1783.
Proconia undata = Oncometopia undata.
from stomach of Sturnella magna, 1013.
Procris. American, 1127.
americana = Harrisiana americana.
falsarius = Acoloithus falsarius.
Grape vine, 213.
Protacanthus milberti, 1127, 1269, 1543.
missouriensis = P. milberti.
Proctrotrupidæ, 2343.
a new genus of, 1749.
Prodenia autumnalis *n. sp.*, 1301 = Laphygma frugiperda.
commelinæ, 850, 1282.
fulvosa = var. of Laphygma frugiperda.
lineatella, 1775.
obscura = var. of Laphygma frugiperda.
sp., 2238.
Prodoxidæ, 2000.
Prodoxus *n. g.*, 1830, 2000.
ænescens *n. sp*, 2000.
cinereus *n. sp.*, 2000.
decipiens *n. sp.*, 1804, 1830, 1854, 1933, 1943, 2000, 2049.
mistaken for Pronuba yuccasella, 1804.
Oviposition of, 2049.
A parasite on, 1831.
Evolution of, 1804.
Further notes on Pronuba and, 2000.
remarks on the difference between Pronuba and, 1854.
intermedius *n. sp.*, 2000.
marginatus *n. sp.*, 2000.
Pronuba *vs.*, 1844.
Structural and anatomical peculiarities of, 2171.
Profits of silk-culture, 2338.
Promachus, 1127.
apivorus, 668, 1059, 1543.
bastardii, 1269.
Promachus vertebratus, 1269.
Promethea silk-worm, 1311.
Prominent. The red-humped, 2291.
unicorn, 1280.
Pronuba *n. g.*, 1329, 1336, 2000.
and its connection with the pollination of Yucca, 2391.
Evolution of, 1804.
maculata *n. sp.*, 2000.
A new tineid genus allied to, 1830.
and Prodoxus. Further notes on, 2000.
remarks on the differences between, 1854.
Structural and anatomical peculiarities of, 2171.
vs. Prodoxus, 1844.
yuccasella *n. sp.*, 1329, 1336, 1337, 1363, 1603, 1854, 1933, 1943, 2000, 2171.
Chrysalis of, 1414.
Further remarks on, 1603.
Mr. Hulst's observations on, 2371.
mistaken for Prodoxus decipiens, 1804.
Mystery in reference to, 1933.
Supplementary notes on, 1337.
Prophecy fulfilled, 709.
Proscopia, 2267.
Prosopis affinis, 1171.
Prospects. Locust, 1527, 1562, 1582.
Protection of insect collections, 2180.
Protective device employed by a glaucopid caterpillar, 2242.
resemblances. Mimicry or, 1301, 1340.
Proteoteras *n. g.*, 1968.
æsculana *n. sp.*, 1968, 2114, 2206.
Protoparce carolina, 131, 933, 1089, 1262, 2238.
celeus, 131, 152, 401, 490, 710, 815, 851, 885, 993, 1059, 1089, 1264, 1329, 1558, 1661.
Prunus insects, 1503.
Psenides, 821.
and inquilines. Relations of, 41.
Psenocerus supernotatus, 481, 1458.
Pseudococcus aceris, 1890.
Pseudoneuroptera, 2267.
of Illinois, 24.
New, 24, 39.
Pseudoscorpion, 1884.
Psinidia wallula *n. sp.*, 1959.
Psoci, 2133.
Psocidæ, 1147, 2267.
Psocina. Structure of the claw in, 2045.
Psocus, 1078.
amabilis *n. sp.*, 24.
bifasciatus *n. sp.*, 39.
confluens *n. sp.*, 39.
conterminus *n. sp.*, 39.
geologus *n. sp.*, 24.
lichenatus *n. sp.*, 39.
madescens *n. sp.*, 39.
permadidus *n. sp.*, 39.
perplexus *n. sp.*, 24.
pollutus *n. sp.*, 24.

Psocus purus *n. sp.*, 24.
rufus *n. sp.*, 39.
semistriatus *n. sp.*, 24.
venosus, 176, 1078, 1147, 1195, 1263, 1526, 1798.
Psyche confederata, 1441.
Psychidæ, 1650.
Psychomorpha epimenis, 1301, 1363.
Psylla. Box, 2291.
rubi, 669.
Psyllid galls. Hackberry, 2208.
Psyllidæ of North America. Notes on, 2272.
the United States, 2210.
Pteromalus puparum, 2221.
Pteronarcys, 2267.
Pterophorus carduidactylus *n. sp.*, 1059.
periscelidactylus = Oxyptilus periscelidactylus.
Pthirius pubis, 497.
Ptinus brunneus, 191, 510, 1141.
Publication. Discontinuance of, 2106.
Publilia concava, 163.
Puccinia graminis, 1605.
Pulex irritans, 497.
penetrans = Sarcopsylla penetrans.
sp. feeding on lepidopterous larvæ, 2110.
Pulvinaria acericola = P. innumerabilis.
innumerabilis, 389, 1515, 1816, 2279, 2291, 2355.
macluræ = P. innumerabilis.
vitis, 106, 1212.
Punctured grape-canes, 513, 1333.
Punctures of Hemiptera upon shrubs, fruits, and grains. Webster, F. M. Experiments on the effects of, 2382.
Punctures on rose twig, 1167.
Pupa of the disippus butterfly, 1193.
Pupæ. Habits of, 346.
How to hatch, 509.
Pupation of butterflies. Philosophy of the, 1711.
Nymphalidæ, 1704.
Purged Ophion, 1127.
Purple willow Gracilaria, 2363.
PURSLANE. INSECT AFFECTING.
Deilephila lineata, 1402.
Putnam, J. D. Obituary, 2054.
Pyralid infesting seed-pods of trumpet-vine, 1929.
Pyralis farinalis = Asopia farinalis.
olinalis = Asopia olinalis.
Pyrameis atalanta, 540.
cardui, 1635, 1770.
Pyramidal grape-vine worm, 1301.
Pyrethrum. Additional experiments with, 1903.
cinerariæfolium, 1996, 2235.
Cultivation of, 1984.
Directions for cultivating, 1996.
raising, 1862.
Experiments with, 1948, 2353.
an important insecticide, 2131.
powder. Manufacture of, 1984.
roseum, 1996, 2119, 2343.
for the screw-worm, 1921.
in the United States. Additional notes on the cultivation of, 2377.
The use of, 1858.
its use as an insecticide, 2119.
Pyrethrum willemoti, 2343.
Pyrophila conspersa, 1301.
pyramidea, 785, 1301.
pyramidoides, 671, 785, 1301, 1471.
Hibernation of, 1471.
Pyrrharctia isabella, 244, 558, 909, 1153, 1311, 1802.
Pyrrhia exprimens, 677.
Quackery. Entomological, 439.
Quacks and physicians, 282.
Quedius, 1311.
Queen bees in the mails, 1762.
Quelques mots sur le insecticides, 2283.
Quercus acuminata. Cynips on, 1822.
coccifera. Phylloxera on, 1421.
douglassi. Gall on, 1967.
Galls on the prinus group of, 1606.
infectoria. Gall on, 1560.
muhlenbergi. Cynips on, 1925.
palustris. Coccid on, 1972.
undulata. Galls on, 1942.
Queries answered, 217.
Bundle of entomological, 1463.
Questions answered, 1246.
Quick traveler, 752.
Quince Curculio, 1301.
QUINCE. INSECTS AFFECTING.
Capsus oblineatus = Lygus pratensis.
Conotrachelus cratægi, 1301.
Eriocampa cerasi, 2243.
Lygus pratensis, 2.
Selandria cerasi = Eriocampa cerasi.
Quince. Saw-fly on the, 2243.
Rabbit insects, 290.
Race. Some further facts regarding that fatherless, 1658.
That fatherless and motherless, 1650.
RAGWEED. INSECTS AFFECTING.
Epicauta pennsylvanica, 732.
Lytta atrata = Epicauta pennsylvanica.
Railroad worm, 2238.
Ranatra, 1709.
fusca, 797, 1191.
Range of the rear-horse, 859.
Ransom chip-trap for Conotrachelus, 1177.
Ranunculus acris. Insects affecting, 156.
Curculio remedy, 1201.
Rapacious soldier-bug, 1059.
Rape butterfly, 836, 1294.
our new cabbage pest, 1257.
Rare capture in Illinois, 1271.
monstrosities, 2224.
Rasahus biguttatus, 497.
Rascal leaf-crumpler, 341, 373, 1311, 1580.
in Georgia, 1962.
Raspberries. Do bees injure, 529.
destroyed by weevils, 1788.
Raspberry borer, 783.
brand, 676.
canes dying, 1035.
Eggs of snowy tree-cricket in, 1122.
tree-cricket in, 1006.
Gouty gall on blackberry and, 1771.
punctured by Orchelimum glaberrimum, 2249.

Raspberry Geometer, 1059.
  gouty gall, 1124.
  and grape-vines. Egg punctures in, 2195.
RASPBERRY. INSECTS AFFECTING.
  Ægeria rubi = Bembecia marginata.
  Agrilus ruficollis, 1124, 1771.
  Bembecia marginata, 1363. 1453.
  Chionaspis furfurus, 1968.
  Diaspis harrisii = Chionaspis furfurus.
  Dipteron, 676.
  Monophadnus rubi, 663, 761, 1212, 1641.
  Oberea bimaculata, 783, 1363.
    perspicillata = O. bimaculata.
    tripunctata, 1503.
  Œcanthus niveus, 961, 1006, 1122, 1503, 1691, 2195.
  Orchelimum glaberrimum, 2249.
  Otiorhynchus picipes, 1788.
  Rhodites radicum, 1149.
  Selandria rubi = Monophadnus rubi.
  Synchlora rubivoraria, 1059.
Raspberry-root borer, 1363.
  gall, 1149.
  saw-fly, 1212, 1641.
  Scale insect on, 1968.
  worms, 663, 761.
Rat-tailed larva, 168.
Ratzeburg. Forest trees and weeds of Germany (review), 1110.
Rear-horse, 1059.
  Eggs of the Mantis or, 1060.
  Range of the, 859.
Rear-horses *vs.* grasshoppers, 590.
Record of American entomology (review), 827.
Red ants, 2309.
  cedar caterpillars, 427.
  clover. Bumble bees and, 2376.
  humped caterpillar, 788.
    prominent, 61, 2291.
  leg. The cussed, 1598.
  legged ham-beetle, 1363.
    locust, 1423, 1625, 2363.
  maple. Ocellate leaf-gall of the, 2119.
  mites, 1959.
    Transformation of the, 1632.
  scale. California, 2394.
    Koebele, A., experiments on the, 2394.
  shouldered Sinoxylon, 1311.
  spider, 1146, 1225, 1710.
    on roses, 1710.
  tailed Tachina fly, 1127.
  weevil, 711.
Reddish snout beetle on apple. Small, 1244.
  yellow spruce bud-worm, 2291.
Reduvius personatus = Opsicœtus personatus.
  raptatorum = Sinea diadema.
Regal walnut caterpillar, 425.
Regulating sex in insects, 1415.
Remarks, 206, 255.
Remedies and appliances, 2375.
  More universal, 278.
  Universal, 204, 503, 818.
Remedy. Another universal, 232.
Report of committee of entomology, Ill. State Hortic. Soc., 1056.
Report of committee of entomology, Mo. State Hortic. Soc., 1113, 1127.
  experiments, chiefly with kerosene, upon insects injuriously affecting the orange-tree and cotton-plant, 2164.
  to governor of Kansas on the grasshopper question, 1573.
  on Lucilia macellaria, 2199.
  of State entomologist of Illinois, 1, 373.
    Missouri, 1, 1059.
      2, 1127.
      3, 1301.
      4, 1311.
      5, 1329.
      6, 1363.
      7, 1423.
      8, 1482.
      9, 1579.
      Index, 2026.
  U. S. Ent. Commission, 1, 1643.
    2, 1959.
    3, 2267.
    4, 2343.
  U. S. Entomologist for 1878, 1721.
    1881–'82, 2119.
    1883, 2232.
    1884, 2291.
    1885, 2363.
    1886, 2394.
    1887, 2418.
Reports. Missouri entomological, 1680.
  U. S. Entomological Commission, 1757.
Resemblances. Mimicry or protective, 1301, 1340.
Resistance of grape-vines to Phylloxera in sandy soil, 2250.
Retarded development in a blister-beetle, 1860.
  of insects, 2040.
  Remarkable case of, 2003, 2005.
Retirement of Mr. Fuller, 1910.
Revision of the Lampyridæ, 1819.
Rhagium lineatum, 2267.
Rheum rhaponticum. Asilus sericeus feeding on, 1543.
Rhinoceros beetle. Gigantic, 580, 1216, 1292.
Rhinopsylla *n. g.*, 2272.
  schwarzii *n. sp.*, 2272.
Rhipiphorus sp., 2301.
  Tiphia and, 2351.
Rhizotrogus sp., 2260.
Rhodites, 1235.
  bicolor, 1037, 1194, 1245.
  radicum, 137, 1149.
  rosæ, 570, 1166, 1939.
Rhodobænus 13-punctatus, 1301, 2119.
Rhodophora florida, 807, 1273.
Rhopalocera, 1635, 1784.
Rhopalosiphum, 1678.
Rhopalus, 372.
Rhus glabra. Insects on, 320.
Rhynchophora, 254, 1301.
Rhynchophorus zimmermanni, 2119.
Rhyssa, 385.
  atrata = Thalessa atrata.
  not lignivorous, 2286.
  lunator = Thalessa lunator.

Ribes insects, 772.
Rice crop. Enemies of the, 273.
grub, 2119.
RICE. INSECTS AFFECTING.
Acridium obscurum, 2119.
Cecidomyia oryzæ, 1949.
Chalepus trachypygus, 273, 1911, 1949, 1973, 2119.
Chilo oryzæellus, 2119, 2120.
Laphygma frugiperda, 2011.
Lissorhoptrus simplex, 273, 1911, 1973, 2119.
Murmidus ovalis, 2217.
Rice. Insects affecting stored, 2190.
enemies of growing, 1911.
plant. Another enemy of the, 2011.
Insect enemies of the, 1949.
Insects affecting, 2119.
Water weevil of the, 1973.
stalk borer, 2119.
New, 2120.
weevil, 1683.
Ricinis communis. Acrididæ feeding on, 1645.
Ridding the ground of cut-worms, 2310.
Riley to Dr. Schaffer. Entomology. Professor, 2360.
in favor of the birds. Professor, 1675.
Letter from Prof. C. V., 1676.
and the locusts. Professor, 1434.
Yucca moth. Professor, 2068.
Riley's report to the governor of Kansas. Professor, 1573.
researches, 2067.
Ring-banded soldier-bug, 1311.
legged Pimpla, 1329.
Robber. Many-banded, 1059, 1423.
Robin. Cut-worms from the stomach of, 1873.
Insects from the stomach of, 1926.
Rock-bass. Insects from stomach of, 1793.
Rocky Mountain grasshopper, 1557.
locust, 1423, 1451, 1452, 1482. 1538, 1557, 1570, 1625, 1643, 1959, 1998, 2267, 2291.
Bruner, L., observations in the Northwest on the, 2165.
in 1880. Martin, J., on the, 2267.
1885. Bruner, L., report on the abundance of the, 2363.
Geographical distribution of the, 2267.
or grasshopper. Governors of Western States on the, 1557.
Important observations on, 1575.
Lecture on the, 1493.
in Montana in 1880. Bruner, L., 2267.
Natural history of the, 1578.
and other insects in the Northwest during the summer of 1883. Bruner, L., observations on the, 2277.
Rocky Mountain locust. Philosophy of the movements of the, 1669.
scourge, 1629.
in Wyoming, Montana, etc., in 1881. Bruner, L., the, 2267.
Rocky Mountains. Excursion to, 988.
Rogas n. sp., 879.
sp., 1002.
Roller. Strawberry-leaf, 984, 1059, 1574.
Roman-nosed pupa, 1217.
Rooms. Swarms of minute flies in, 596.
Root Aphis, 990, 1038.
Apple-borer and, 1038,
blight. Apple, 997.
borer, 981.
Raspberry, 1363.
lice. Knots on apple-tree roots caused by, 1187.
louse. Barley, 2394.
Syrphus-fly, 1059.
Roots of Ampelopsis. Swellings on, 1428.
Insects affecting apple-tree, 963.
Rosaceæ. Diastrophus confined to, 1131.
insects, 1149.
Rose. Bedeguar of the, 1939.
beetle, 361.
in California. Fuller's, 1740.
Fuller's, 1708, 1721, 2291.
Habits of Fuller's, 1708.
Not Fuller's, 1825.
bug, 373, 1075.
on apples, 748.
Rose bug remedy, 1478.
bugs, 1278.
bushes. Bark-lice on, 1303.
chafer, 1329, 1583.
chafers on grape-vines, 1375.
gall, 1235.
Mossy, 570, 1166.
Prickly, 1194, 1245.
galls. Oak and, 1037.
ROSE. INSECTS AFFECTING.
Aramigus fulleri, 1708, 1721, 1740.
Cynips bicolor = Rhodites bicolor.
Diaspis rosæ, 1303.
Heliothis marginidens = Pyrrhia exprimens.
Lecanium oleæ, 1303.
rosæ, 1303.
Macrodactylus subspinosus, 361, 373, 1075, 1329, 1375, 1478, 1583.
Monostegia rosæ, 672, 1780.
Pyrrhia exprimens, 677.
Rhodites bicolor, 1037.
rosæ, 570, 1037, 1166, 1194, 1245, 1939.
sp., 1235.
Selandria rosæ = Monostegia rosæ.
Tetranychus telarius, 1710.
Rose-slug, 672, 1780.
twig. Puncture on, 1167.
worms, 677.
Roses. Failure of tea, 1708.
The red spider on, 1710.
Rot in plums. Preventing, 1685.
Rotten root, 758.

Round-headed apple-tree borer, 1059, 1608, 2238.
New facts about the, 1630.
Oviposition of the, 2266.
Rove beetle. Spotted, 1123.
beetles, 1558.
Royal horned caterpiller, 702, 803, 860, 1275.
Rubus insects. 1503,
Rudbeckia. Aphid on, 2205.
RUDBECKIA. INSECTS AFFECTING.
Nectarophora rudbeckiæ, 2205.
Siphonophohra rudbeckiæ = Nectarophora rudbeckiæ.
Rue. Papilio asterias on, 1512.
worms, 1512.
Rumex insects, 1165.
Russia. Excessive injury done by a beetle in, 1935.
Rust. Grain Aphis *vs.*, 1806.
and Hessian-fly. Wheat, 1605.
of orange, 2308.
Hubbard, H. G. Report on, 2291.
red social wasp, 1329, 1558.
Rustic. Corn, 1059.
Ruta graveolens. Insects on, 1512.
Rye. Beetle working in wheat, oats, and, 1259.
gall-gnat, Loew, H. Description of, 2267.
RYE. INSECTS AFFECTING.
Cecidomyia secalina, 2267.
Silvanus surinamensis, 1259.
Tenebrio molitor, 72.
Rye. Worms in flour and, 72.
Sack bearers, 1052.
Saddle-back caterpillars, 60, 161, 424, 829, 1092.
Sage. Galls growing on wild, 1347.
St. Louis Academy of Science. Presidential address, 1564, 1629.
Sale of silk-worm eggs, 1908.
Salivary glands of Phylloxera, 1687.
Salix. Galls of Cecidomyidæ on, 46, 197.
nigra. Vanessa antiopa on, 1609.
Salt and vinegar for insects, 937.
water insects used as food, 2203,
Salutatory, 386.
Samia cecropia = Attacus cecropia.
columbia = Attacus columbia.
cynthia = Attacus cynthia.
The ailanthus silk-worm, 1718.
Food-plants of, 2204.
ricini = Attacus ricini.
San Joaquin Valley, California. Coquillett, D. W. Report on locusts of, 2363.
Sandy soil. The Phylloxera in, 2250.
Sannina exitiosa, 55, 587, 617, 871, 1017, 1059, 1070, 1475, 1513, 2238.
Saperda, 379, 934, 2267.
bivittata = S. candida.
Oviposition of, 1621.
calcarata, 71, 963, 1849.
candida, 2, 6, 55, 57, 277, 377, 421, 578, 714, 870, 939, 962, 1023, 1038, 1056, 1059, 1213, 1227, 1332, 1367, 1441, 1513, 1608, 1621, 1630, 2230, 2238, 2266.
lateralis, 583.
Saperda. Variation in the two-striped, 1213.
on willow, 2267.
Sarcophaga, 1390.
carnaria, 1390, 1452, 2343.
lineata destructive to locusts in Dardanelles, 2075.
sarraceniæ *n. sp.*, 1385, 1390, 2343.
Sarcophagidæ, 2256.
Sarcoptes scabiei, 497.
Sarcopsylla penetrans, 412, 497.
Sarracenia variolaris. Description and natural history of two insects which brave the dangers of, 1390.
Insect-catching habits of, 1385, 1390.
Sarracenias, 1499.
Satellite Sphinx, 1127.
Saturnia io = Hyperchiria io.
maia = Hemileuca maia.
Sauce. Maggots in, 1607.
Savin twigs. Eggs of periodical Cicada in, 698.
Saw-flies, 294.
Spruce-tree, 115.
Saw-fly. Ash, 2291.
eggs, 108.
Elm-tree, 699.
Gooseberry, 140.
Imported, 228, 333.
Grape, 2291.
Larch, 2232.
Large, 1514.
larvæ on the quince, 2243.
Plum, 2291.
Raspberry, 1212, 1641.
Strawberry, 2418.
Scab in apple *vs.* apple-tree plant-lice, 1139.
potato, 239.
Scabby potatoes, 1444.
Scale on acacias. Large white, 1730.
Cottony maple, 1816, 2291.
on Euonymus latifolia, 2403.
insect on maple, 1890.
Cottony, 1515.
Pine-leaf, 1329.
on raspberry, 1968.
Scale insects affecting the orange. Experiments on, 2164.
Coquillett, D. W., gas treatment for, 2418.
Experiments on, 2232.
Introduction and spread of, 2232.
Koebele, A., experiments against, 2418.
on magnolia, 1377.
Methods of destroying, 2119.
New species of, 1919.
of the orange, 2119, 2369.
in Florida. Voyle, J., report on the effects of cold, 2277.
The use of gases against, 2389.
White-pine, 97.
Scales, 218.
Apple-tree, 69.
Scarites subterraneus, 805.

Scarlet mite, 1470.
Scarred apple trees, 951.
Scavenger? Is Cyrtoneura a parasite or a, 2102.
mistaken for a foe, 416.
not a parasite. Phora a, 1923.
Scelio ovivora, 1643.
Scenopinus from human lungs. Larva of, 1348.
sp., 2354.
Schadlicherer Inseckten. Einige unserer, 1325.
Schizoneura americana *n. sp.*, 1678.
cornicola, 27.
fungicola, 27.
lanigera, 58, 367, 372, 373, 467, 495, 963, 990, 997, 1038, 1059, 1187.
rileyi, 1059.
tessellata, 2361.
ulmi, 1059.
Sciapteron polistiformis, 373, 1301, 1509.
robiniæ, 2410.
Sciara, 239, 596, 1547, 1662, 1950.
mali, 211.
ocellaris, 2119.
Scientific names, 101, 430, 826.
nomenclature, 303, 768.
symbols, 405.
Scolopendra castanipes, 834.
Scolytus caryæ *n. sp.*, 220, 938 = S. 4-spinosus.
destructor, 938, 1329.
fagi *n. sp.*, 220.
Food-habits of, 1940.
Hickory, 1754.
Imported orchard, 2233.
pyri = Xyleborus pyri.
quadrispinosus, 220, 938, 1329, 1401, 1754.
rugulosus, 1940, 2233.
Synoptic table of, 220.
Scorpion in Kansas, 1119.
Scorpions, 453.
Scotch and Austrian pines. False caterpillars on the, 1011.
Scrape our trees? Shall we, 1399.
Screw-worm, 209.
in Central America. Prevalence of the, 2158.
its parentage in doubt, 1880.
Pyrethrum for the, 1921.
Scudderia curvicauda, 1363, 2241.
Scurfy apple-bark louse, 2305.
Scymnus cervicalis, 1059.
hæmorrhous, 151.
sp., 151.
Scyphophorus yuccæ, 1602.
Second report State entomologist of Missouri, 1127.
U. S. Entomological Commission, 1957.
Secretion on stems of bitter-sweet. White, waxy, 1913.
Seed corn maggot, 657, 1059, 1065.
grain. Chinch-bug not in, 888.
peas from bugs. To keep, 434.
ticks under bark of apple-trees, 1133.
weevil. Honey locust, 1026.
Seeds and galls. Jumping, 1496, 2163, 2173.
Segments in head of winged insects. Packard, A. S. Number of, 2267.
Selandria cerasi = Eriocampa cerasi.
rosæ = Monostegia rosæ.
rubi = Monophadnus rubi.
vitis = Blennocampa pygmæa.
Self-taught entomologists, 276.
Semasia helianthana *n. sp.*, 1968.
prunivora *n. sp.*, 373 = Grapholitha prunivora.
Semiotellus chalcidiphagus *n. sp.*, 384, 563.
destructor, 1581.
Send plenty of specimens, 592.
Senometopia atropivora, 2343.
militaris *n. sp.*, 6.
Serica iricolor, 74.
vespertina, 1140.
Sericaria mori, 45, 542, 1311, 1346, 1609, 1616, 1648, 1718, 1721, 1724, 1753, 1945, 2062, 2234, 2381.
Length and weight of thread of, 1359,
Sericornis claypoleana *n. sp.*, 2114 = Steganoptycha claypoleana.
instrutana = Steganoptycha claypoleana.
Serrell automatic silk-reel. Walker, P., 2388.
Sesia pelasgus = Hemaris thysbe.
Seventeen-year Cicada, 1034, 1093, 1698, 2312, 2314.
in Iowa, 1737.
Periodical or, 2312, 2314.
Sting of the, 407.
locust, 370, 884, 1489, 1971, 1979.
or thirteen-year locust. Periodical Cicada, alias the, 1159.
Seventh report State entomologist of Missouri, 1423.
Severe cold on insects. Effects of, 2037.
Sex in butterflies. Controlling, 1352.
insects. Regulating, 1415.
Shad. Terrestrial insects in stomach of, 1853.
Shade trees and their insect defoliators, 2378, 2379.
Shaffer. Entomology. Prof. Riley to Dr., 2360.
Shagreened cut-worm, 2291.
Shall we scrape our trees, 1399.
Shedding of tracheæ and double cocoon, [illegible].
Sheep bot, 450.
fly, 2238.
gad-fly, 887.
Sheldon's borer remedy, 195.
Shell-bark hickory. Citheronia regalis on, 775.
Shimer, H., criticised by B. D. Walsh, 174.
Shrubs, fruit, and grains. Webster, F. M. Experiments on the effect of punture of Hemiptera on, 2386.
Sialidæ, 2267.
Sialis infumata, 39.
Sigalphus Curculio parasite, 1301.
curculionis, 1751, 1795.
rufus *n. sp.*, 1301 = var. of curculionis.
Silesia in 1869. Cohn, F. Hessian-fly in, 2267.
Silk-culture, 1668, 1753, 2119, 2291, 2363, 2394.
in California. Promotion of, 2000.
the colonies, 2278.
how to dispose of cocoons, 1881.
in Kansas, 1542.
Profits of, 2338.

Silk-culture in the United States, 1668, 1945, 2070, 2196, 2336.
  Walker, P., 2418.
 fiber from cocoons raised at the Department. McMurtrie, W. Test of, 2253.
 industry in the United States (Review), 2268.
 producer. Antheræa yama maia as a, 1346.
 reel. Walker P. Serrell's automatic, 2386.
 spiders, 830.
Silk-worm, 2095.
  Ailanthus, 899, 1311.
  breeding, 1648.
  Cecropia, 1311.
  Circular, 2303.
  cocoons, 1486.
  eggs, 1114, 1753.
   Japanese mode of packing, 1616.
   prices and where obtained, 2062.
   Sale of, 1908, 2303.
  Length and weight of the thread of the, 1359.
  Luna, 1311.
  Manual of the, 1721, 1724.
  in Missouri. Ailanthus, 1460.
  Mulberry, 1311.
  naturalized. Ailanthus, 1179.
  notes, 2232.
  Osage orange for the mulberry, 1220, 1286.
   vs. mulberry for the, 2234.
  Perny, 1311.
Silk-worm. Polyphemus, 1311.
  Promethea, 1311.
  Tusseh, 1311.
  Yamamai, 1311.
Silk-worms fed with osage orange, 1341.
  Food for, 1318.
  Nomenclature of American, 303.
Silky mite, 1423, 1625.
Silpha americana, 817, 1226.
 peltata = S. americana.
 surinamensis, 1259, 1260, 1261.
Silphurus femoratus, 39.
Silvanus: Grain, 1259.
  in dried English currants, 1260.
  in flouring-mills, 1261.
Silver plate by insects. Damage to, 2154.
Simulium, 1160, 2291, 2416.
  attacking mules, 1811.
  feeding on other insects, 2177.
  from Lake Superior, 2032.
  meridionale *n. sp.*, 2394.
  molestum, 1174.
  pecuarum *n. sp.*, 2394.
  pictipes, 1958, 2032.
  piscidium *n. sp.*, 1174, 1283, 1345.
Sinea diadema, 34, 638, 731.
Singular caterpillar, 880.
Sinoxylon basilare, 1311, 1747.
  Red shouldered, 1311.
Siphonophora, 1678.
  avenæ = Nectarophora granaria.
  rudbeckiæ = Nectarophora rudbeckiæ.
Sitaris, 1600, 1643.
Sitones flavescens, 2394.
Sitophilus granarius = Calandra granaria.
  oryzæ = Calandra oryzæ.
  remotepunctata = Calandra remotepunctata.
Six worst insect enemies of fruit-growers in northern Illinois, 377.
Sixth report State entomologist of Missouri, 1363.
Skeletonizer. Apple-leaf, 1311, 1322.
Skipper. Cheese, 1700.
Skippers injuring smoked ham, 1734.
Slug on pear and cherry-trees, 1222.
  Pear-tree, 1382.
  Rose, 672, 1780.
  worm. Spined, 1150.
Small apple-leaf worm, 747.
  borer in apple-twig, 1458.
  galls and minings in apple-twigs, 552.
  grains. A new leaf-hopper injurious to, 1767.
   and grasses. Webster, F. M. Insects affecting, 2394.
  reddish snout beetle in apple, 1244.
  white bristly cut-worm, 1059.
Smaller cornstalk borer, 2119.
Smart bugs. Concerning certain, 565.
Smeared dagger, 1301.
Smerinthus. Blind-eyed, 1912.
  excæcatus, 1912.
Smicra albifrons, 6.
Smilax. Agrotis saucia injuring, 1941.
  injured by cut-worms, 1941.
Smilia auriculata, 1183.
Smith, E. A. The cotton belt, 2343.
Smith, J. B. Report upon cranberry and hop insects, 2277.
  Report upon insects affecting the hop and the cranberry, 2291.
Smith's patent Curculio-trap, 969.
Smoked hams. Skippers injuring, 1734.
Smut in wheat, 1479.
  Cause of, 1461.
Snake of Brazil. Lignified, 2136.
 worms, 1547.
Snakes. Hair, 612, 861, 1143.
  Horse hair, 612.
Snellen von Vollenhoven. Obituary, 1817.
Snout beetle, 700, 1168, 1302.
  on apple. Small reddish, 1244.
  Imbricated, 1301, 2291.
  Large gray straight horned, 1033.
 beetles injurious to fruits, 1302.
Snow-balls. Aphididæ on, 1184.
  Lice on, 1184.
 fleas, 608.
Snowy tree-cricket, 1059, 1329, 2238, 2291.
  in raspberry canes. Eggs of, 1122.
So-called army-worms. Three, 328.
  web-worm of young trout, 1283.
Soap. Apply, 1367.
 against borers, 47.
Social wasp. Rust-red, 1329, 1558.
Social wasps, 616.
Sod-worm, 2418.
Soft maples. Flat-headed borer in, 1250.

Soil. The Phylloxera in sandy, 2250.
Soils. Effects of Paris green on, 1427
Solanaceæ insects, 1238.
Solanum carolinense. Cassida texana on, 2096.
Doryphora juncta on, 2096.
elæagnifolium. Cassida texana on, 2096.
Flea-beetle eating, 1782.
insects, 1238.
melongena. Cassida texana on, 2215, 2235.
Doryphora juncta on, 2096, 2215, 2235.
Solar physics and locust multiplication and migration. Swinton, A. H., 2267.
Soldier-beetle larvæ, 1643.
Pennsylvania, 1059.
bug, 1558, 2291.
Bordered, 1059.
Glassy-winged, 1301.
Rapacious, 1059.
Ring-banded, 1311.
Spined, 456, 1059, 1311, 1329, 1523.
Solenobia, 38, 943.
Solenopsis geminata, 2105.
xylonii = S. geminata.
Solidago. Aphid on, 2205.
gall moth, 1059.
Grapholitha olivaceana bred from, 2285.
leaves. Galls on, 1924.
nemoralis. Cecidomyia carbonifera on, 1924.
Song notes of the periodical Cicada, 2334.
Sorghum. Nola sorghiella on, 2119.
Sorghum web-worm, 2119.
Sound organs in sphingid pupæ. Probable, 2101.
South America. Report on cotton crop and its enemies in, 2343.
American lepidoptera. Notes on, 1784.
Entomological ignorance in the, 390.
Field for the entomologist in the, 1109.
Fruit-culture in the, 2265.
The imported cabbage-worm in the, 1714.
Muscle-shape bark-louse on apple trees in the, 1774.
Notes from the, 1657.
Pass, Ill. The bag-worm at, 1156.
side of trees. Apple-tree borers on, 634.
west. Economic investigations in the, 1864.
Southern buffalo-gnat, 2291, 2394, 2418.
cabbage-butterfly, 1127, 2232, 2238.
grass-worm, 1127.
Illinois. Entomological tour in, 372.
Sowing cotton seeds in hot-beds, 1772.
Spain. Phylloxera congress in, 1906.
Span-worms. Gooseberry, 1068, 1570.
Sparrow. Anent the English, 1667.
as an insect killer. Worthlessness of the, 2413.
Spathius trifasciatus *n. sp.*, 1329.
Spattered-copper underwing, 1301.
Spearman. Larva of the ten-striped, 866.
Ten-striped, 32.
Species. Geographical range of, 1614.
Old question of, 2201.
of Otiorhynchidæ injurious to cultivated plants, 2117.
Phytophagic, 45, 50.
Species. Theory of, 384.
Specific for the Colorado potato beetle, 1490.
names. Capitalizing, 2170, 2257.
value of Apatura aliciæ, 1977.
Specimens lost, 1210.
Send plenty of, 593.
Speckled cut-worm, 1059, 2291.
Specters. Walking-sticks or, 1395.
Spectrum bivittatum, 1298.
femoratum = Diapheromera femorata.
Speculations of the New England school of naturalists. Entomological, 44.
Professor Dana and his entomological, 82.
Spermophagus robiniæ, 1026, 1474.
Sphæria morbosa, 930.
Sphærophthalma occidentalis, 814, 832, 858.
Sphecidæ. Table of genera of, 375.
Sphecius speciosus, 371, 372, 407, 543, 858, 2014.
Sphenophori that attack corn. Larval habits of, 2030.
Sphenophorus. Cocklebur, 1301.
Corn, 1301.
Grain, 2363, 2394.
parvulus, 2394.
robustus, 2030, 2119.
sculptilis, 337, 1042, 1301.
zeæ *n. sp.*, 337 = S. sculptilis.
Sphex ichneumonea, 543.
Sphida obliquata, 2357.
Sphingicampa *n. g.*, 40.
bicolor, 40, 45.
Sphingicampa distigma *n. sp.*, 40 = S. bicolor.
Sphingid pupa. Probable sound organ in, 2101.
Sphingidæ, 771, 1089, 1277, 1418, 1419, 1761, 1784, 2101.
Sphinx. Abbot, 1127, 1248, 1277.
Achemon, 1127.
atropos, 2101.
carolina = Protoparce carolina.
catalpæ = Ceratomia catalpæ.
hageni = Ceratomia hageni.
Larva of Abbot, 1248, 1277.
Aquatic, 1951.
Osage orange, 2119.
5-maculata = Protoparce celeus.
Satellite, 1127.
White-lined morning, 630, 1198, 1301, 1643, 2291.
Sphyracephala brevicornis, 299.
Spider egg-nest. Mud-wasp and, 1847.
Egg sacks of some unknown, 1144.
Ladder, 1299.
and nest, 1869.
Poisonous, 2306.
Red, 1146, 1225, 1710.
on roses. Red, 1710.
wort owlet-moth, 1301.
Spiders, 217.
Grape leaf-folders eaten by, 468.
Jumping, 2302.
Silk, 830.
Trees injured by, 2409.
Spilochalcis mariæ, 1112.
Spilonota oculana = Tmetocera ocellana.
Spilosoma acræa, 2343.
virginica, 296, 454, 1202, 1307.

Spindle-worms, 331.
Spined slug-worm, 1150.
  soldier-bug, 456, 1059, 1311, 1329, 1523.
  spider, 813.
Spirobolus marginatus, 166, 963, 1025.
Spittle insect, 93.
Spotted lady-bird, 599.
  Pelidnota, 1301.
  rove-beetle, 1123.
  touch-me-not. Cecidomyia impatientis on, 852.
    Galls on, 852.
  trumpet-leaf. Insects associated with, 1385, 1390.
Spraying trees for protection against insects. Improved method of, 2211.
Spread of Pieris rapæ into Alabama, 1720.
  scale insects. Introduction and, 2232.
Spring canker-worm, 1423, 1482, 2238.
    Howell, M. A. Experience with, 2267.
  Locust injury next, 1555.
  tails, 317.
Sprinklers and atomizers, 1857.
Spruce-borer. Flat-headed, 2267.
  bud. Tortrix, 2232.
    worm. Reddish yellow, 2291.
  Epizeuxis, 2363.
SPRUCE. INSECTS AFFECTING.
  Epizeuxis, 2363.
  Lophyrus abietis, 115.
  Melanophila, 2267.
  Nematus integer, 2232.
  Plume moth, 2363.
  Therina, 2363.
  Tortrix fumiferana, 2332.
Spruce. Nematus, 2232.
  plume-moth, 2363.
  Therina, 2363.
  tree saw-flies, 115.
Squares. Butterfly larvæ injurious to cotton, 1872.
Squash-borer, 378, 1127.
  bug, 409, 867, 1059.
    does not touch the white bush scollop, 825.
    Glorified, 262.
SQUASH. INSECTS AFFECTING.
  Anasa tristis, 409, 825.
  Coreus tristis = Anasa tristis.
  Diabrotica vittata, 355.
  Epilachna borealis, 125.
  Melittia ceto, 125, 248, 378.
  Trochilium cucurbitæ = Melittia ceto.
Squash-vine borer, 248.
    insects, 125, 355.
Squirrel-bot, 526.
Stag-beetle, 957, 1517.
    Horns of the, 755.
Stalk-borer, 1558, 1595, 1646, 2291.
    Dahlia, 862, 1009.
      and aster, 940.
    Rice, 2119.
    Tomato, 694, 976.
  weevil. Potato, 1558.
Staphylinidæ wanted. American, 1786.
Staphylinus maculosus, 1123, 1186.
State entomologist of Illinois, 327.
    for Minnesota, 1108.
      New York, 1863.
    One day's journal of a, 383.
Status and future prospects of silk-culture in the United States, 2336.
Steele, J. P., report on cotton insects, 2343.
Steganoptycha claypoleana *n. sp.*, 2206.
Stick-bug, 448.
Stictonotus isosomatis *n. sp.*, 2119.
Still they come, 908.
Sting? Do locusts, 371.
  of the seventeen-year, 407.
Stinging bug, 778.
  caterpillars, 1748.
  larvæ, 760, 811, 1329.
Stings of bees, 116.
  insects, 116, 217.
Stiretrus anchorago, 372.
  fimbriatus = S. anchorago.
Stizus brevipennis *n. sp.*, 375 = Megastizus brevipennis.
  grandis = Sphecius speciosus.
  speciosus = Sphecius speciosus.
Stock. Insect injurious to live, 2238.
Stomach of black-bass. Larvæ in, 1792.
    blue-bird. Ichneumon in, 1878.
      Larvæ from, 1871.
    cat-bird. Tipula eggs in, 1735, 1745.
    lark, robin, and sun-fish. Insect from, 1926.
    meadow-lark. Beetles in, 1013.
    robin. Cut-worms from, 1873.
    rock-bass. Insects from, 1793.
    shad. Terrestrial insects in, 1853.
Stomoxys calcitrans, 864.
Stored corn. Serious injury to, 1683.
  rice. Insects affecting, 2190.
Strachia histrionica = Murgantia histrionica.
Straight-horned snout-beetle. Large gray, 1033
Strange bug, 1078.
Strawberry beds. White-grub in, 1236.
    borers, 2385.
    bugs, 637.
    crown-borer, 1301.
      Notes on, 1393.
    destroyer, 689.
    Eggs of bugs on, 690.
    enemy, 342.
    and grape-vines. Injured, 682.
STRAWBERRY. INSECTS AFFECTING.
  Ægeria impropria, 2385.
  Agrotis tricosa, 2324.
  Anarsia lineatella, 2235.
  Anchylopera fragariæ = Phoxopteris fragariæ.
  Anthonomus musculus, 2363
  Capsus oblineatus = Lygus pratensis.
  Chrysomelidæ, 2235.
  Colaspis flavida, 1904.
  Corimelæna pulicaria, 637.
  Cyclocephala immaculata, 1236.
  Eccopsis permundana, 2324.
  Emphytus maculatus = Harpiphorus maculatus.
  Graphops, 2229.

STRAWBERRY. INSECTS AFFECTING—Continued.
Harpiphorus maculatus, 499, 955, 964. 1570, 1586, 2324.
Julus sp., 834.
Lygus pratensis, 682, 2235.
Monostegia rosæ, 984.
Myriapod, 2235.
Paria aterrima, 1904, 2229.
Phoxopteris fragariæ, 499, 984, 1059, 1574, 2324.
Polydesmus serratus, 342.
sp., 834.
Saw-fly, 2418.
Selandria rosæ = Monostegia rosæ.
Tyloderma fragariæ, 1301, 1393.
Strawberry leaf-roller, 984, 1059, 1574.
A new enemy to, 1904.
Pests of the, 2324.
saw-fly, 2418.
weevil, 2363.
worm, 955, 965, 1570.
and remedy, 1586.
worm, 499.
Streaked cottonwood leaf-beetle, 2291.
Striped-beetle, 2291.
blister-beetle, 1059, 1230, 1558.
bug, 123, 175.
cucumber-beetle, 773, 1127, 2238.
bug, 148.
flea-beetle, 2291.
Sturnella magna. Contents of the stomach of, 1013.
Subangular ground beetle, 1059.
Subscribers. To our, 1106.
Subterranean mites. Description of new, 1370.
Successful management of the most destructive orange insects, 2088.
Successor. Mr. Walsh's, 1105.
Sucking organs of bees, wasps, and flies, 2182.
Sugar-berry. Leaf-galls and caterpillars, 762.
Orgyia leucostigma on, 762.
cane in Brazil; Branner, J. C. Insects injurious to, 2277.
SUGAR CANE. INSECT AFFECTING.
Ligyrus rugiceps, 1794.
Sugar-maple. Beetle in, 1014.
borer, 2291.
Eggs on, 350.
Mite gall on, 1265.
tree-borer, 547.
SUGAR-TREE. INSECTS AFFECTING.
Arhopalus speciosus = Plagionotus speciosus.
Plagionotus speciosus, 547.
Sugaring for moths, 1300.
Natural, 2138.
Sulphur cure on peach trees, 176.
in trees, 98, 228, 931, 1154, 1383.
Sumach-beetle. Jumping, 1363.
Eggs in, 118.
SUMACH. INSECTS AFFECTING.
Blepharida rhois, 1363.
Coccid, 320.
Orchelimum sp., 118.
Xiphidium sp., 118.
Summer. Anticipated locust injury next, 1615.
dormancy of butterfly larvæ, 1410.
larva of Phyciodes nycteis, 1410.
Sunfish. Insects from stomach of, 1926.
Sunspots and insect life, 2094.
Supposed army-worm in New York and the eastern States, 1990.
bark-lice eggs in Missouri, 1084.
cause of yellows in peach trees, 515.
dock. Galls on, 1165.
eggs of the preying Mantis, 1002.
hibernating Aletia chrysalids, 1927.
trout enemy, 1141.
Swallow-tail. Larva of thoas, 1237.
Philenor, 1127.
Thoas, 1268.
Swallows, 878, 1502.
Dipterous larva on, 153.
Swarms of butterflies, 406, 1050.
lady-birds, 824.
minute flies in rooms, 596.
that devastate the trans-Mississippi country. Locust, 1674.
Sweet-potato beetles, 681, 1510, 1697.
SWEET-POTATO. INSECTS AFFECTING.
Cassida bivittata 681, 1127, 1510.
nigripes, 1127, 1510, 1697.
sp., 94.
Cassididæ, 993, 1056, 1082, 1127, 1510.
Coptocycla aurichalcea, 681, 1127, 1510.
bivittata = Cassida bivittata.
guttata, 1127, 1510.
nigripes = Cassida nigripes.
Gryllus sp., 2384.
Swellings in apple scions, 548.
roots of Ampelopsis, 1428.
Swinton, A. H., Solar physics and locust multiplication and migration, 2267.
Switzerland. Extermination and restriction of Phylloxera in, 2207.
SYCAMORE. INSECTS AFFECTING.
Cerambycid, 2267.
Lachnus platanicola, 2138.
Symbols. Scientific, 405.
Synchlora rubivoraria, 721, 1059.
Synergus albipes = S. lana.
lana, 41.
lignicola, 41.
mendax *n. sp.*, 41.
rhoditiformis *n. sp.* 41 = S. lignicola.
Synonyms of parasites, 1932.
Synophrus albipes *n. sp.* = Synergus lana.
Synopsis of North American Heliothinæ (Review), 2178.
Syntomeida sp., 2412.
Syringa. Citheronia regalis feeding on, 803.
Syrphidæ. Larval habits of, 168.
Syrphus-fly. Root-louse, 1059.
mellinus, 1813.
sp., 1251, 1798.
caught by flower of Bidens chrysanthemoides, 1761.
Systematic position of the Orthoptera. Packard, A. S., 2267.
relations of Platypsyllus as determined by the larva, 2417.
Systœchus leucophæus, 2355.
oreas, 1541, 1947, 1959, 2002.
Tabanus atratus, 1127.

Tabanus, sp., 40.
Table. On our, 395, 408, 506, 546, 568, 623, 827, 1110.
Tachina aletiæ *n. sp.*, 1712, 2343.
  anonyma *n. sp.*, 1311.
  archippivora *n. sp.*, 1301 = Masicera archippivora.
  concinnata, 2343.
  flies, 1643, 1736.
  fly, 1558.
    Anonymous, 1423, 1625.
    Cecropia, 1311.
    Red-tailed, 1127.
    Yellow-tailed, 1127, 1625.
  fraterna, 2343.
  phycitæ, 1311.
  sp., 2378.
  villica, 2343.
Tachinid eggs, 1914.
Tachinidæ, 66, 1301.
Tæniopteryx fasciata, 249.
Tamarack. Pieris menapia feeding on, 2121.
Tamariscus. Nanodes tamarisci on, 1496.
Tansy for borers, 1016.
Tarantula killer. Notes on the, 823.
  of Texas, 466, 521, 1178.
    again, 493.
Tarnished plant-bug, 1127, 1219, 2291, 2363.
Tarred paper for fruit trees, 1568.
Tat. Tit for, 432.
Tawney emperor, 1363.
Tea roses. Failure of, 1708.
Telea polyphemus, 244, 542, 629, 635, 841, 1164, 1311.
    Caterpillar of, 765.
    Cocoons of, 2181.
Telenomus, 2115.
  bifidus, 2378, 2394.
Telephoridæ, 374.
Telephorus bilineatus, 1311, 1885.
Temnochila virescens = Trogosita virescens.
Ten-lined potato beetle, 925.
  striped spearman, 32.
    Larvæ of, 866.
Tenacity of life, 1755.
Tenebrio molitor, 72, 191, 980, 2167.
  obscurus, 191, 2167.
Tenebrionidæ, 2105.
Tent caterpillar, 642.
    of the apple tree, 336, 1301, 2238, 2291.
    Eggs of the American, 1329.
    of the forest, 645, 688, 1181, 1200 1301, 1331.
  caterpillars, 363.
    and fall web-worms, 819.
Tenthredinidæ, 197, 294.
    Descriptions of new, 385.
    Larvæ of, 108.
Tenthredo. Venation of, 197.
Teras cinderella, 1311.
  malivorana, 1311.
  Willow, 2363.
Terias, 1711.
Termes, 2267.
  flavipes, 1620, 1729.
Terrestrial larvæ in stomach of shad, 1853.
Test of machinery for destroying the cotton-worm. Barnard, W. S., 2253.
Tests of silk-fiber from cocoons raised at the Department. McMurtrie, W., 2253.
Tetranychus americanus, 1326.
  irritans, 1326.
  telarius, 1146, 1225, 1710.
    Means against, 508.
Tetraopes femoratus, 323.
  5-maculatus, 1140.
  tetraophthalmus, 323.
  tornator = T. tetraophthalmus.
Tetrastichus esurus, 1712, 2343.
  productus *n. sp.*, 2332.
Tettigonia coagulata, 1024.
  sp., 951.
  vitis = Typhlocyba vitis.
Tettigonidæ, 452.
Tettix granulata, 1566.
Texas again. Tarantula of, 493.
  fever. Ticks and, 404.
  in 1883. Anderson, E. H. Cotton-worm in south, 2253.
    spring of 1886. Bruner, L. Locusts in, 2382.
  Tarantula of, 466, 521, 1178.
Thalessa, 2286.
  atrata, 338, 477.
  lunator, 1111, 1126, 2350.
Thecla pœas, 1872.
Thelaxes ulmicola = Colopha ulmicola.
Thelia bimaculata, 787.
Theory. Plug-ugly, 233.
  wanted. New locust, 1532.
Theridula sphærula, 2343.
Therina. Pine, 2363.
  Spruce, 2363.
Thersilochus conotracheli *n. sp.*, 1301, 1751.
Thick-thighed walking-stick, 1701, 1721.
Third report State entomologist of Missouri, 1301.
  U. S. Entomological Commission, 2267.
Thirteen-year locust. The periodical Cicada alias the seventeen-year and the, 1159.
Thistle. Beetles on, 169.
THISTLE. INSECTS AFFECTING.
  Diabrotica longicornis, 169.
  Phyllobrotica longicornis = Diabrotica longicornis.
  Platyptilus carduidactylus, 1059.
Thistle-plume, 1059.
Thoas swallow-tail, 1268.
    Larva of the, 1237.
THORN. INSECTS AFFECTING.
  Anthonomus cratægi, 376.
  Cecidomyid, 376.
Thorn-leaf gall. Mr. Couper's, 376.
Those centennial insects, 1511.
Thousand-legged worm, 193, 236, 261, 834, 1025.
Three-banded Spathius, 1529.
  lined leaf-beetle, 1059, 1558.
  so-called army-worms, 328.
  worms and their work, 1504.
Thrips, 1127, 2362.
  Food-habits of, 53, 280, 685.
  sp., 203.

Thrips. True and bogus, 203.
of the vine-grower, 53.
Thrushes. Food-habits of, 1726.
Thyreus abbotii, 763, 1018, 1118, 1127, 1248, 1277.
Thyridopteryx ephemeræformis, 182, 206, 266, 271, 427, 538, 629, 641, 738, 815, 1036, 1059, 1090, 1156, 1189, 1352, 1424, 1472, 1650, 1658, 2272, 2378, 2379.
Thyridopteryx ephemeræformis. Remarks on, 2272.
Thysania zenobia, 1291.
Thysanoptera, 174.
Thysanura, 2267.
Tibicen cassinii, 1057, 2367.
septendecim, 51, 189, 213, 370, 407, 474, 527, 618, 619, 648, 698, 707, 746, 884, 920, 1034, 1037, 1057, 1059, 1093, 1159, 1311, 1489, 1609, 1624, 1698, 1737, 1809, 1836, 1971, 1979, 1994, 2014, 2112, 2144, 2216, 2305, 2307, 2312, 2314, 2315, 2318, 2320, 2321, 2329, 2334, 2363, 2367.
tredecim, 474, 746, 1034, 1057, 1159, 1609, 1624, 1809, 1836, 1979, 1994, 1997, 2014, 2112, 2307, 2312, 2329, 2367.
Ticks under bark of apple-trees. Seed, 1133.
and Texas fever, 404.
Tiger beetle. Common, 1763.
larva, 719.
Virginia, 1059.
beetles, 628, 1643.
moth. Chrysalis of the virgin, 674.
Isabella, 1311.
Tilden tomato and tobacco-worm, 933.
Tile-horned Prionus, 1127.
Tilia gall, 1116.
Odontota rubra on, 1849.
Timber borers, 191.
encourages apple-tree borers, 1441.
Insect in, 918.
TIMOTHY. INSECTS AFFECTING.
Hadena devastatrix, 2394.
Sphenophorus parvulus, 2394.
Timothy: Webster, F. M. Insects affecting, 2394.
Tinea, 1633.
Tineid. Apple-tree, 77, 92.
genus allied to Pronuba. A new, 1830.
Tineidæ, 70.
New genus of, 1329, 1336.
Tineids in bee-hives, 252.
Fossil, 2084.
Tineina, 1246.
Tingis amorphæ *n. sp.*, 45 = Gargaphia amorphæ.
ciliata = Corythuca ciliata.
tiliæ *n. sp.*, 45 = Gargaphia tiliæ.
Tiphia femorata, 1363.
inornata, 1363, 2301.
and Rhipiphorus, 2351.
Unadorned, 1363.
Tipula, 947, 1161, 1278, 1368.
eggs in stomach of cat-bird, 1735, 1745.
sp., 512.
trivittata, 512, 1735.
Tit for tat, 432.
Tmetocera ocellana, 747.
Toads, 217, 262.
eat worker bees? Do, 544.
in gardens, 822.
vs. bugs, 1103.
TOBACCO. INSECTS AFFECTING.
Crepidodera cucumeris, 1782.
parvula, 1782.
Epitrix cucumeris = Crepidodera cucumeris.
hirtipennis = Crepidodera parvula.
Gryllus sp., 2384.
Macrosila carolina = Protoparce carolina.
5-maculata = Protoparce celeus.
Protoparce carolina, 131, 933, 1262, 2238.
celeus, 131, 771, 885, 933, 1329.
Sphinx carolina = Protoparce carolina.
5-maculata = Protoparce celeus.
Tobacco moth, 131.
plants. Flea beetles on young, 1782.
worm, 885, 2238.
moth, 1059.
Counterworking the, 1329.
Tilden tomato and the, 933.
Tolype velleda, 972, 1773.
Tomato feeding worm, 850.
fruit worm, 1136.
gall. Grape-vine, 1329.
TOMATO. INSECTS AFFECTING.
Doryphora 10-lineata, 21.
Gortyna nitela, 694, 734, 976.
Heliothis armigera, 1136.
Prodenia commelinæ, 850.
Protoparce carolina, 933, 1089.
celeus, 152, 155, 933, 1089, 1661.
Sphinx 5-maculata = Protoparce celeus.
Tomato stalk borer, 694, 976.
and the tobacco worm. Tilden, 933.
worm, 152, 1059, 1558, 1661.
again, 1104.
Worm eating into green, 734.
worm. Parasitized, 155.
That venomous, 1089.
worms not poisonous, 771.
Tomicus pusillus = Pityophthorus minutissimus.
ramulorum = Pityophthorus micrographus.
Tongue. Butterfly's, 1815.
Humming-bird moths caught by the, 1388.
Moths and butterflies caught by the, 1761.
Too fond of honey, 764.
Toothed Dermestes, 2363.
Torrubia, 1064.
elongata, 1430, 1436.
ravenelii, 1803, 1823.
Tortoise beetle. Black-legged, 1127.
Clubbed, 1227, 1558.
Golden, 1127.
Larva of clubbed, 1238.
Mottled, 1127.
Pale thighed, 1127.
beetles, 105, 767, 1082, 1127.
Tortricid. A pretty new gall-making, 2176.
Tortricidæ, 918, 1975.
Description of new, 1969.
Oviposition of, 1922.
Tortrix cinderella *n. sp.*, 1311 = Teras cinderella.
fractivittana = Cacœcia fractivittana.
fumiferana, 2232.
rileyana = Cacœcia rileyana.

Tortrix. Spruce bud, 2232.
Walnut, 1059.
Touch-me-not. Cecidomyia impatientis on spotted, 852.
Galls on spotted, 852.
Tracheæ and double cocoons. Shedding of, 1715.
Trade in insects, 1986.
Tragidion fulvipenne, 490.
Tragocephala viridifasciata = Chortophaga viridifasciata.
Transformations of insects, 528.
Mite, 1618.
of red mites, 1632.
the tumble bug, 1386.
Trap. Thomas Wiers's apple-worm, 1312.
Trapping the carpet beetle, 1752.
Treat's insect extinguisher (Review), 531.
Tree borers of the family Cossidæ. Bailey, J. S., 2253.
cricket, 251, 953, 961, 999.
on grape vines. Eggs of, 723.
Grapes cut off by, 414.
Habits of, 207.
Jumping, 1329.
in raspberry canes. Eggs of, 1006.
Snowy, 2238.
Snowy, 1329, 2291.
cut-worms, 229, 281.
hopper. Buffalo, 415, 1329.
injurious to potatoes. Buffalo, 2107.
Trees. Apple-tree borers of the south side of, 634.
injured by spiders, 2409.
for protection against insects. Improved method of spraying, 2211.
Shall we scrape our, 1399.
Tremex columba, 458, 928, 1126, 2286.
Pigeon, 458, 1126.
Trenton, N. J. Bennett, T. Report of experiments at, 2344.
Trichius delta, 372.
Trichobaris trinotata, 401, 1059, 1558, 2172.
Trichodectes ovis, 2043.
Trichogramma minutum *n. sp.*, 1301.
pretiosa *n. sp.*, 1712, 2115, 2343.
Trichopsenius depressus, 1729.
Trichoptera, 2267.
Trifolium insecta, 1459.
Trimble's insect enemies of fruit, etc. (Review), 187.
Trimerotropis cœruleipes *n. sp.*, 1959.
latifasciata *n. sp.*, 1959.
similis *n. sp.*, 1959.
Triodites, 1947.
mus, 1959, 2002.
Trioza tripunctata, 669.
Triphleps insidiosus, 1853, 2048.
Triplax thoracica = Tritoma thoracica.
Tritoma thoracica, 114.
Tritoxa flexa, 225.
Triungulin of Meloidæ, 2083.
Trochilium acericolum = Ægeria acerni.
acerni = *Ægeria acerni*.
caudatum = Alcathœ caudatum.
cucurbitæ = Melittia ceto.
denudatum = Fatua denudata.
Trochilium hospes, 197.
sp., 1063.
tipuliformis = Ægeria tipuliformis.
Trogoderma tarsale, 2167.
as a museum pest, 2139.
Trogosita mauritanica = Tenebrioides mauritanica.
virescens, 721.
Trogus obsidianator, 1802.
Troilus butterfly caterpillar, 469.
Trombidium, 624.
developed from Astoma, 2071.
giganteum *n. sp.*, 1632.
holosericeum, 1470.
locustarum *n. sp.*, 146, 728, 1287, 1451, 1521, 1598, 1618, 1632.
muscarum *n sp.*, 1632.
sericeum, 1451, 1470, 1598, 1618.
telarium = Tetranychus telarius.
tinctorium, 1470.
Trout. Death-web of young, 1138, 1160, 1174.
enemy. Supposed, 1141.
Food for, 1142.
So-called web-worm of young, 1283.
True army-worm, 647, 1127.
and bogus Yucca moth, 1804.
Thrips and bogus Thrips, 203.
Trumpet grape-gall, 791, 1116, 1329.
leaf. Insects associated with the spotted, 1385, 1390.
vine. Clydonopteron tecomæ in seed-pods of, 1929.
Pyralid infesting seed pods of, 1929.
Trupanea apivora = Promachus apivorus.
Truths in applied entomology. General, 2291, 2292.
Trypeta pomonella *n. sp.*, 177, 367, 373, 454, 1320, 1553, 1654, 2119, 2238.
solidaginis, 137, 180, 798, 1059.
Tryphon atricoxus *n. sp.*, 385.
Trypoxylon albitarse, 543.
Tulip-tree bark-louse, 271.
Tumble-dung. Transformation of the common, 1386.
Turf web-worm, 2418.
Turk and its crescent. The little, 329.
Turkey-gnat, 2394.
Turnip enemy, 215.
Polydesmus complanatus an enemy to, 215.
Tusseh silk-worm, 1311.
Tussock-moth. Caterpillars of the white-marked, 1227.
Eggs of the white-marked, 480, 600.
White-marked, 1059, 1363, 2238, 2378.
again, 535.
Twelve-spotted Diabrotica, 687, 1127, 2418.
Twice-stabbed lady-bird, 38, 1329, 1883.
Twig-borers, 1052, 1185.
girdler, 476, 1938.
Twigs amputated by some unknown animal, 442.
Berry and cherry, 1503.
Eggs in or on canes and, 1329.

Twigs girdled by some animal, 443.
  pruners, 288.
  punctured by periodical Cicada, 1055.
Two-striped locust, 1423, 2363.
  Saperda. Variation in, 1213.
  sweet-potato beetle, 1127.
  walking-stick, 1298.
Tyloderma fragariæ, 1301, 1393.
Typhlocyba aurea *n. sp.*, 22.
  binotata *n. sp.*, 22.
  pallidula *n. sp.*, 22.
  tricincta, 25.
  vitis, 203, 686, 1392, 1853.
Typhlocybini. New species of, 22.
Typhlodromus pyri, 1739, 1759.
Tyroglyphus phylloxeræ *n. sp.*, 1363, 1370.
  siro, 1703.
Uji parasite, 1311.
Uloma impressa, 805.
Ulmus. Gall-making Pemphiginæ on, 1653.
Unadorned Tiphia, 1363.
Unfledged locusts. Destruction of young or, 1577.
  Habits of young or, 1578.
Unicorn apple-tree caterpillars, 749.
  prominent, 1280.
Unimpregnated eggs hatch? Will, 1029.
Unique and beautiful noctuid, 2189.
United States. Agricultural advancement in the, 1750.
  Clothes moths observed in the, 2146.
  The cotton-worm in the, 1769.
  Department of Agriculture. Division of Entomology—
    Bulletin 1, 2164; 2, 2165; 3, 2253; 4, 2277; 6, 2304; 8, 2315; 10, 2378; 11, 2344; 12, 2364; 13, 2382; 14, 2388; 15, 2389.
  Entomological Commission.
    Appropriation for, 1843.
    Bulletin 1, 1577; 2, 1578; 3, 1736; 6, 2026.
    Circular 1, 1575; 2, 1576.
    Report 1, 1643; 2, 1959; 3, 2267; 4, 2343.
    Reports, 1757.
    Supplementary instructions to agents of the, 1888.
U. S. Entomologist. Report for 1878, 1721.
  1881-'82, 2119.
  for 1883, 2232.
  1884, 2291.
  1885, 2363.
  1886, 2394.
  1887, 2418.
United States. New source of wealth to, 1668.
  Notes on Aphidinæ of the, 27, 1678.
  Psyllidæ of the, 2210.
  settled fact. Hibernation of Aletia xylina in the, 2141.
  Silk-culture in the, 1668, 1945, 2070, 2196.
    industry in the (Review), 2268.
United States. Status and prospects of silk-culture in the, 2336.
Unity of coloration in insects, 50.
Universal remedies, 204, 503, 818.
  More, 278.
  remedy. Another, 232.
Unjust accusation, 1537.
Unknown corn pest, 1073.
  larvæ, 853.
  moth, 753.
  worm, 986.
Unmasked. A friend, 374.
Unnatural secretion of wax, 782.
Unsightly galls on cotton-wood, 446.
Untrue. Attractive but, 1644.
Urena Anomis, 2119.
  lobata. Anomis erosa feeding on, 2343.
Uroceridæ injurious to apple-twigs, 893.
Urocerus flavicornis, 2347.
Uropoda americana *n. sp.*, 1505, 1626.
  vegetans, 1626.
Useful Labena, 1423.
  lives. Two, 2370.
  A nuisance made, 983.
Useless? Is any knowledge, 1135.
Ustilago segetum, 1461, 1479.
Utah in 1878. Packard, A. S. Notes of a journey to, 1959.
Utilization of ants in horticulture, 2089, 2137.
Vagabond Crambus, 2119.
Valedictory, 326.
Valery Mayet on Phylloxera, 2207.
Valuable insecticides. Two, 1742.
Vanessa antiopa, 540, 907, 1234, 1327, 1609, 1704, 1711.
  comma = Grapta comma.
  interrogationis = Grapta interrogationis.
Variable molting in Orgyia, 2379.
Variation in Anisopteryx, 1540.
  the two-striped Saperda, 1213.
Variegated cut-worm, 1059, 2291.
  Eccopsis, 2363.
Varieties. Phytophagic, 45, 50.
Varying Anomala, 2291.
Vegetable phenomena, 436.
Vegetal-feeding ground beetles, 1738.
Vegetation caused by locusts. Changes in, 1495.
  Harris. Insects injurious to (Review), 568.
  in Illinois. Insects injurious to, 6, 52.
  Legislation to control insects injurious to, 1946.
Venation of wings of Anisopteryx, 1540.
Venomous tomato-worm. That, 1089.
Vera Cruz, Mexico. Interesting cotton-worm notes from, 1845.
Verified. Predictions, 1494.
Vertical insect-boxes, 1963.
Vesicants. Meloidæ as, 912.
Vespa crabro, 616.
  maculata, 543.
Vespidæ, 190, 505, 770.
Victoria. Grape Phylloxera in Geelong, 1732.
Vilfa vaginæflora, 402, 1495, 1538.
Vine area of France affected by Phylloxera. Half the, 2320.
  Blue caterpillars of the, 1127, 1363.

Vine-growers. Thrips of, 53.
infested with parasites. Hog caterpillar of the, 1247.
Insects injurious to the, 2238.
loving pomace fly, 2119.
Vinegar for insects. Salt and, 937.
Virgin tiger-moth. Chrysalis of the, 674.
Virginia tiger-beetle, 1059.
Vitis lituus, 1116.
vinifera. Phylloxera destructive to, 1727.
viticola, 1116.
V-marked Cacœcia, 2363.
Viviparity of a moth, 2153.
Volume. Close of the first, 701.
Voyle, J. Experiments on orange scale insects, 2164.
Report on the effects of cold on the scale insects of the orange in Florida, 2277.
Wagner, B. Observations on the new crop gall-gnat, 2267.
Walker, P. Serrell's automatic silk-reel, 2388.
Silk-culture, 2418.
Walking-stick, 144.
Thick-thighed, 1701, 1721.
Two-striped, 1298.
sticks. Cicadas and, 920.
or specters, 1395.
Walnut case-bearer, 1311.
caterpillars, 1229.
Gregarious, 1045.
Insect feeding on the sap of black, 1195.
WALNUT. INSECTS AFFECTING.
Cacœcia rileyana, 1059.
Clisiocampa disstria, 363.
sylvatica = C. disstria.
Datana ministra, 1045, 1229, 2222, 2333.
Notodontid, 757.
Phycis juglandis, 1311.
Psocus venosus, 1195.
Walnut Tortrix, 1059.
tree. Worm on bark of, 757.
and willow. Enemies of the black, 2333.
Walsh, B. D. Entomological collection of, 1107, 1203.
In memoriam, 1098.
Portrait of, 1128.
Posthumous paper by, 1344.
Successor to, 1105.
Walshia amorphella, 1127, 2356.
Wanted. Information, 1111.
War on corn-worms, 1522.
Warbles, 898.
Washington Entomological Society. Address as president, 2355.
Wasp. Ichneumon-fly mistaken for, 477.
and parasites. Mud, 1827.
spider-egg nest. Mud, 1847.
Wasps, 1736.
Digger, 309.
and their habits, 375, 543, 615.
Social, 616.
Sucking organs of, 2182.
Water bug, 797, 1191.
Gigantic, 534.
larva, 1205.
Water. Moths attracted by falling, 2108.
weevil, 2119.
of rice-plant, 1973.
Wavy-striped flea-beetle, 348, 564, 2291.
Wax-beans. Epilachna corrupta eating, 2135.
insect. New, 2119.
Unnatural secretion of, 782.
worm, 1059.
Waxy secretion on stem of bitter-sweet. White, 1913.
Ways of bag-worms, 1424.
Wealth to the United States. A new source of, 1668.
Web-worm. Fall, 1301, 1733, 2238, 2378, 2394.
Garden, 2363.
on hickory. Fall, 460.
Juniper, 1721.
Sorghum, 2119.
Turf, 2418.
of young trout. So-called, 1283.
of young trout. Death, 1138, 1160, 1174.
Webster, F. M. Insects affecting barley, 2394.
buckwheat, 2394.
fall-wheat, 2291, 2363, 2394.
small grains and grasses, 2394.
timothy, 2394.
white clover, 2394.
Record of experiments on the effect of punctures of hemiptera upon shrubs, fruits, and grains, 2382.
Report on Buffalo gnats, 2388.
of experiments at Lafayette, Ind., 2344.
upon the season's observations in Indiana, especially upon corn insects, 2418.
Weeping lace-wing, 1127.
Weevil, 1673.
on apple-trees, New York, 1085.
Clover, 1777.
Honey-locust seed, 1026.
Rice, 1683.
plant water, 1973.
Strawberry, 2363.
Weevils. Aniseed *vs.* grain, 1742.
Raspberries destroyed by, 1788.
Well-known animals, Little known facts about, 2071.
Wells. White worms in, 1015.
West. Canker worms at the, 1539.
Economic investigations in the South and, 1864.
Genuine army-worm in the, 2009.
Hop growing in the, 235, 279.
Important observations on the grasshopper pest of the, 1571.
Indies. Report on the cotton crop and its enemies in, 2343.
Locusts in the, 2044.
Winged pests of the, 2313.
Western cricket, 1959, 2267.

Western cricket, Bruner, L. Observations on the, 2267.
Histology of, 1959.
governors on the Rocky Mountain locust, 1557.
grasshopper, 1998.
Missouri. Ravages of young locusts in, 1492.
striped cut-worm, 1059.
Westward progress of the imported cabbage-worm, 1694, 1721.
What are army-worms? 1400.
becomes of bumble bees? 1032.
Wheat. Beetles supposed to be feeding on, 1746.
Bruchus. A new insect in, 19.
Cause of smut in, 1461.
cut-worm, 1059.
Cut-worms destroying recently sown, 455.
Damage to, 1870.
fly. Companion, 2394.
head army-worm, 1570, 2418.
Hessian fly in seed, 494.
insects, 1506.
WHEAT. INSECTS AFFECTING.
Aphis avenæ = Nectarophora granaria.
Asopia farinalis, 980.
Blissus leucopterus, 886, 888, 894, 895, 2363.
Brachytarsus variegatus, 1461, 1479.
Bruchus sp., 19.
Calandra remotepunctata, 15.
Calocoris rapidus, 2363.
Cecidomyia destructor, 494, 1506.
tritici = Diplosis tritici.
Cecidomyid, 18.
Chlorops sp., 2060.
Cicadula exitiosa, 1766.
Cut-worm, 1059.
Diedrocephala flaviceps, 1766, 1767, 2363.
Diplosis tritici, 109, 110, 142, 216, 280, 292, 372, 428, 711, 1512, 2238, 2267, 2363.
Dræocoris rapidus = Calocoris rapidus.
Euschistus fissilis, 2363.
Gortyna nitela, 1589, 1870.
Isosoma grande, 2288, 2291, 2363, 2394.
hordei, 2394.
nigrum = I. hordei.
tritici, 2060, 2063, 2123, 2363, 2394.
Jassus sexnotatus, 1766.
sp., 1766.
Leucania albilinea, 1507, 1570.
Longitarsus sp., 636.
Lygus pratensis, 2363.
Meromyza americana, 727, 1058, 1506, 1589, 1848, 1875, 2394.
Nectarophora granaria, 1806.
Noctuid, 455.
Oscinus sp., 2394.
Pyralis farinalis = Asopia farinalis.
Silvanus surinamensis, 1259.
Sitophilus remotepunctata = Calandra remotepunctata.
Tenebrio molitor, 980.
Wire-worm, 2418.
Wheat Isosoma, 2063, 2119.
just before it ripens, Meromyza americana attacking, 1058.
Wheat. Leaf-hoppers injuring, 1766.
maggots, 727.
midge, 109, 110, 142, 216, 280, 292, 428, 711, 1512, 2238, 2291, 2363.
A new enemy to, 1507.
insect injurious to, 2288.
oats, and rye. Beetles working in, 1259.
plant. Klippart's (Review), 186.
rust and Hessian fly, 1605.
Smut in, 1479.
stalk-worm on Pacific coast, 2123.
stalks. New depredator infesting, 2060, 2063.
straw Isosoma, 2291, 2394.
Larger, 2291, 2394.
Webster, F. M. Insects affecting, 2394.
fall, 2291, 2363, 2394.
wire-worm, 2418.
Worm in joints of, 1848.
worms, 980.
injuring, 1875.
in reference to, 1789.
White ant. Inquilines in galleries of, 1729.
blast, 2119.
clover. Webster, F. M. Insects affecting, 2394.
grub, 68, 410, 1020, 1059, 2238, 2363, 2394.
fungus, 594, 1064, 1430, 1436, 1599, 1803, 1823.
again, 640.
information wanted, 1072.
parasite, 1363.
grubs, 541.
in strawberry-beds, 1236.
heart hickory Gelechia, 2363.
lined morning Sphinx, 630, 1198, 1301, 1643, 2291.
marked tussock-moth, 1059, 1363, 2238, 2378.
again, 535.
caterpillar, 1227.
eggs, 480, 600.
oak. Leaf-miner on, 1879.
Woolly gall on, 739.
pine plant-louse, 320.
scale, 97.
trees killed by borers, 1049.
weevil, 781, 2363.
worm, 465, 956.
Abbot's, 1570.
scale on acacias. Large, 1730.
Means against, 2374.
waxy secretion on stems of bitter-sweet, 1913.
willow insects, 907.
worm, 917, 1211.
worms in wells, 1015.
Why noxious insects increase upon us, 766.
Wier, D. B. Native plums, 2388.
Wier's apple-worm trap. Thomas, 1312.
trap. The coddling-moth, 1334.
Wild cherry. Caterpillar's nest on, 242.
cherry. Cocoon on, 259.
grape-vine. Conical galls on leaves of, 1077.
sage. Galls growing on, 1347.
Will unimpregnated eggs hatch? 1029.

- Willow. Enemies of the black walnut and, 2333.
  - gall. Pod-like, 1170.
  - galls, 46.
    - of Cecidomyidæ on, 46, 197.
  - Gracilaria. Purple, 2363.
- WILLOW. INSECTS AFFECTING.
  - Cecidomyia salicis-siliquæ, 1170.
  - Cecidomyidæ, 46, 197.
  - Cimbex americana, 1380, 2291, 2333.
    - laportei = C. americana.
  - Clostera americana = Ichthyura inclusa.
  - Coleopteron. 197.
  - Dipteron, 197.
  - Gracilaria, 2363.
  - Hymenopteron, 197.
  - Ichthyura inclusa, 856.
  - Nematus ventralis, 907, 917, 1211.
  - Saperda, 2267.
  - Tenthredinidæ, 197.
  - Teras, 2363.
  - Vanessa antiopa, 907, 1234, 1609.
- Willow insects. White, 907.
  - Teras, 2363.
  - worm. Large, 1380.
    - White, 917, 1121.
  - worms. Gregarious, 856.
- Winged pests of the West, 2313.
  - Phylloxera in California, 1895.
- Wire-worms, 224, 892, 932, 1030, 2238.
  - Means against, 103.
  - in potatoes, 846.
- Wits jump together. How great, 567.
- W-marked cut-worm, 1059, 2291.
- Wonder. Back-rolling, 1363.
- Wood-borers. Food habits of, 1902.
  - Rearing, 1829.
  - gall on white-oak, 739.
  - lice on grape-vine roots, 1900.
  - nymph. Beautiful, 1127, 1363.
    - Pearl, 1127, 1301, 1363.
- Woolly elm-tree louse, 1059.
  - lice on the beech, 449.
  - slug-like worm on apple, 796.
- Work in entomology, 202, 418.
  - Three worms and their, 1504.
- Worker bees? Do toads eat, 544.
- Workers among hymenoptera, 311.
- Works on North American microlepidoptera, 1975.
- World. Insect, 1466, 1467.
- Worm. Apple, 1666.
  - in apple, 177.
  - Army, 11, 17, 120, 670, 876, 906, 1127, 1442, 1482, 1551, 1570, 2119, 2239, 2267, 2269.
  - on bark of walnut tree, 757.
  - boring into cucumber, 808, 843.
    - peach, 1182.
    - in wheat-stalk, 1870.
  - Canker, 86, 172, 1021, 1066, 1127, 1363, 2012.
  - in corn, 181.
  - Cotton, 1127, 1363, 1649, 1702, 1719, 2077, 2119, 2130, 2295.
  - Currant, 877, 1204.
  - eating in green tomatoes, 734.
  - Hundred legged, 219.
  - infesting meal sacks, 1896.
- Worm. In joint of wheat, 1848.
  - question, 909.
  - and remedy. Strawberry, 1586.
  - snake, 1662.
  - Tobacco, 885, 2238.
  - Tomato, 152, 1059, 1558, 1661.
  - An unknown, 986.
- Worms. Bee bread devoured by, 1293.
  - in cabbage, 1915.
  - Clover, 83. 675, 948, 1132.
  - in cottonwood, 1459.
  - Currant, 364, 882, 1696.
  - on Dutchman's pipe, 1321.
  - feeding on hawthorn, 1051.
  - in flour and rye, 72.
  - on horse-chestnut. Gregarious, 1192.
  - How to free wells of, 1015.
  - injuring wheat, 1875.
  - in joint wheat, 1848.
  - under mulch hay, 1161.
  - in osage orange seed, 597.
  - in potatoes. Wire, 846.
  - in wells, 1015.
  - Wire, 224, 892, 932, 1030, 2238.
  - and their work. Three, 1504.
- Worthlessness of the sparrow as an insect killer, 2413.
- Wyckoff's silk-industry in the United States (Review), 2268.
- Wyoming, Montana, etc., in 1881. Bruner, L. The Rocky Mountain locust in, 2267.
- Xanthoptera ridingsii *n. sp.*, 1411 = Exyra ridingsii.
  - semicrocea, 1385, 1390.
- Xiphidium, 118.
- Xyleborus cælatus, 2267.
  - obesus, 1583.
  - Packard, A. S. Development of, 2267.
  - pyri, 2, 149.
- Xyleutes robiniæ = Cossus robiniæ.
- Xylina cinerea *n. sp.*, 1301 = Lithophane antennata.
- Xylocopa carolina = X. virginica.
  - virginica, 872, 1111.
- Xyloryctes satyrus, 40, 471.
- Xylotrechus colonus, 2267.
- Yama-mai silkworm, 1311.
- Year. Destructive insects of the, 2322.
  - Entomological notes of the, 2235.
  - Insects of the, 2289, 2331.
  - Is this a grasshopper, 1565.
- Yeast ferment in insects. Experiments with, 1930.
- Yellow-bear. Common, 1301.
  - fever-fly, 1950.
  - headed cut-worm, 1059.
  - locust, 2363.
  - tailed Tachina-fly, 1127, 1625.
  - swallow-tail, 361.
- Yellows in peach trees. Supposed cause of, 515.
- Yersin. Function of the nervous system of articulates, 1959.
- Young grasshoppers, 2377.
  - locusts. Destruction of, 1577.
    - Ditching for, 1488.
    - Habits of, 1578.

- Young locusts in western Missouri. Ravages of, 1492.
  - pecan trees girdled, 489.
  - tobacco-plants. Flea-beetle on, 1782.
  - trout. Death-web of, 1138, 1160, 1174.
    - So-called web-worm of, 1283.
- Yucca, 1602, 1603.
  - angustifolia fertilized by Pronuba yuccasella, 1804.
  - borer, 1420, 1482, 1570.
    - Notes on the, 1465.
  - Fertilization of, 1329, 1336, 2171.
  - filamentosa. Prodoxus decipiens ovipositing in, 2049.
  - Further notes on the pollination of, 2000.
- YUCCA. INSECTS AFFECTING.
  - Elaphidion tectum, 1602.
  - Megathymus yuccæ, 1420, 1465, 1482, 1570, 1602.
  - Prodoxus decipiens, 2000, 2049.
  - Pronuba yuccasella, 1329, 1336, 1337, 1354, 1363, 1603, 2000, 2171, 2391.
- YUCCA. INSECTS AFFECTING—Continued.
  - Sycophorus yuccæ, 1602.
- Yucca moth, 1363.
    - Oviposition of the, 1354.
    - Professor Riley and the, 2068.
    - True and bogus, 1804.
  - Pollination of, 1603, 1804, 2000, 2371.
  - Pronuba and its connection with the pollination of, 2391.
- Zaræa inflata, 2360.
- Zarhipis, 2397.
  - Further notes on Phengodes and, 2411.
  - Phengodes and, 2408.
- Zebra cabbage-worm, 2232.
  - caterpillar, 179, 1127.
- Zeller. Death of Professor, 2179.
- Zerene catenaria, 1140.
- Zimmermann's flea-beetle, 2291.
- Zoo-geographical map of North America. Packard, A, S., 2267.
- Zygæna minos, 2224.

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